Medical Times

A Monthly Journal of Medicine, Surgery and the Collateral Sciences

Published by THE MEDICAL TIMES COMPANY at 95 Nassau Street

VOL. L., No. 12 NEW YORK, DECEMBER, 1922 Twenty Cents a Copy Two Dollars a Year

CONTENTS

Established 1872 *Entered at the New York Post Office as Second Class Matter*

Medical Times

A Monthly Journal of Medicine, Surgery, and the Collateral Sciences

Vol. L., No. 12 — New York, December 1922 — Twenty Cents a Copy, Two Dollars a Year

Testicular Grafts*

DR. SERGE VORONOFF,

DIRECTOR OF THE LABORATORY OF EXPERIMENTAL SURGERY OF THE COLLEGE OF FRANCE; ASSISTANT DIRECTOR OF THE BIOLOGICAL LABORATORY OF THE PRACTICAL SCHOOL OF SUPERIOR STUDIES.

Paris

At the 28th meeting of the French Congress of Surgery held in Paris October 8, 1919, I had the honor of submitting the results of 120 testicular grafts performed upon animals in my laboratory in the Physiological Department of the College de France.

Since that time I hace felt myself justified in applying to man a method thus largely practised on animals. The first graft upon a human subject dates from June 10, 1920, but, notwithstanding repeated requests, I have refused, up to the present, to publish results, wishing to submit them to the test of time.

Some publication of conclusions submitted doubtless in all good faith, but based on insufficient data, has often led the opinion of the scientific world astray.

Difficulty of Obtaining Human Grafts

I have been obliged to obtain material for my grafts from monkeys, since the difficulty of procuring human grafts renders their employment practically impossible. The removal of testicle from a living human being can only constitute an exceptional case; its rapid removal after the accidental death of a healthy man is surrounded by very great difficulties, and is even forbidden by legislation.

A complete ignorance of biological laws is shown by those who admit for an instant the possibility of grafting the testicles of animals other than monkeys upon man. Their tissues can only constitute in our organism foreign bodies doomed, not to re-absorption, but to mortification. Only monkeys, and in particular antropoides, form a race neighboring to our own and can furnish some grafts, which will find in the midst of our tissues the same conditions of life as in their original home.

Biological Relation Between Monkey and Man

What must convince the most incredulous of the fact that man is united to the higher monkey by ties of an intimate biological relation, is the conclusion reached by Gruenbaum, Uhlenhute, Bruch, and since confirmed by other savants, that the human blood is similar to the monkey's, while it differs completely from that of other animals.

I wish to give a brief resume of my experiments upon animals, several of which have been under my direct observation for the past five years.

Testicular Grafts Upon Females

The first testicular graft upon my laboratory register bears the date of June 8, 1917. I grafted the testicle of a lamb of 8 days under the skin of the back of a sheep of three and one half months. Re-absorption of graft at the end of six months. New graft, July 8, 1918. This time the grafts were transplanted under the peritoneum.

This sheep dropped a male lamb on April 18, 1919, and another in February, 1920. Its horns retained the habitual aspect of those of the females of this race; but a noteworthy modification was produced in its size. The grafting of the testicles has had a very certain effect upon the growth of the bones of the limbs. If the castration lengthened the tibias, a fact established by observation upon castrated animals and eunuchs, the grafting of testicles upon a young female has had a contrary effect and has given rise to a premature ossification of the connecting cartilages.

A similar operation on June 24, 1917, was carried out upon a young white female goat of 6 months. I did a double ovariotomy upon the female before grafting the testicles. This ovariotomized and masculinated goat was kept up to April 28, 1921. She remained small, the abridgment of limbs was noteworthy, and the horns assumed a thickness sensibly superior to that of a normal goat. Ten similar operations were performed upon females, some of them previously ovariotomized, others having received the graft without being deprived of their ovaries. I have at present a she goat, aged 5 years, on whom the testicles of a young male have been grafted for four years and a half. She presents the characteristic abridgment of the limbs I have always observed among young females after testicular graftings.

* Address delivered before the 31st French Congress of Surgery in Paris in October, 1922.

Testicular Grafts Upon Castrated Males

I have made numerous testicular grafts upon castrated males, rams and he-goats alike, in order to ascertain if transposed testicles can play their ordinary rôle in animals deprived of their own, and replace them in their function as endocrine glands.

My first testicular graft upon a ram, previously castrated, was performed on May 23, 1918. I still have the animal. Permit me to give a complete description of this particular case, the others being similar except for some unimportant details.

Operation, May 23, 1918. A young he-goat, No. 15, aged 6 months, white with black spots upon the body. Its horns measured scarcely 7 centimetres. Another young he-goat, No. 16, aged 3 months, from which the testicles were removed, to be grafted upon No. 15.

The operation was first performed upon No. 15. This animal has been deprived of its right testicle in an experiment two months previously. Its right vaginal was thus empty, and it only remained for me to open the left vaginal, and remove the left testicle, according to the cordal ligature. Thus goat No. 15 was deprived of both testicles. Double castration was then performed upon the second he-goat. The entire left testicle of No. 16 was placed in the left vaginal of No. 15, being fixed to the cord by several sutures. The right vaginal was then reopened, having remained empty for two months, and the half of the right testicle of No. 16 introduced. This half was divided into several fragments before being transplanted. The vaginals were sewn with catgut, and the skin of the scrotum with silk.

The entire testicle grafted in the left vaginal was removed April 22, 1919. It was found diminished in volume, but very vasculated. Some vessels, very visible, covered its surface, and it bled abundantly the moment it was detached from the surrounding tissues to which it adhered strongly. It was remitted to the Histological Laboratory of the School of Medicine in Paris, and the examination was reported in the bulletin of the Biological Society. (*Vide Bulletin.*)

The most interesting detail observed in connection with the animal which had submitted to this graft was the growth of horns which, as is well known, depends upon testical hormone, as the comb does in the case of the cock. It is well known that castration practised on animals at an early age, thereby depriving them of testicular hormone, prevents the appearance of the horns, and when the operation is practised later, the existing horns are arrested in their development, and take on the aspect of the small horns of the females.

Although the he-goat, No. 15, had been entirely deprived of his own testicles, the growth of his horns underwent no arrest in their development but continued to grow normally and the general aspect of the animal was in nowise modified. He was deprived of one of his grafted testicles on April 22, 1919, and a new graft was performed that same day. The half of a testicle taken from a young he-goat aged one year (No. 46) was implanted in the left vaginal. The result of the operation once again presented nothing in particular, but at the end of two years the palpation of the scrotum no longer showed the presence of the grafted fragments, neither on the left nor on the right.

I concluded, therefore, that they could be re-absorbed within a period of two years, and I proceeded to make a third graft on June 6, 1921, two years and two months after the second. I transplanted into the vaginals of the he-goat a testicle divided into several fragments and borrowed from a he-goat of two years (No. 192).

Since May 23, 1918, this castrated he-goat only received testicular hormone from testicles successively borrowed from other animals. Yet he appears like a normal uncastrated he-goat. He possesses magnificent horns, the head is characteristic of the male, and he preserves the sportive manner and disposition belonging to the males of the race.

But what denotes the influence of grafted testicles even better is the fact that this he-goat, deprived of testicles at the age of 6 months, experienced the awakening of his sexual instinct exactly as if he were possessed of his own testicles. Indeed, the presence of she-goats during the rut season awakens his sexual appetite, provokes manifestations of his virility and the creature accomplishes the sexual act normally without the projection of the seminal liquid being able to take place.

The grafted testicles have then performed their functions like endocrinate glands which dominate the secondary sexual characteristics of the male and determine his impetuosity, his sexual instinct, and his virile capacity.

The testicular hormone artificially obtained by the graft has favored, at the same time, the nutritious exchange necessary to the evolution of the vital processes. No accumulation of fat in the tissues; no disturbance in growth; no diminution of energy such as one observes in animals deprived of testicles.

Testicular Grafts Upon Senile Animals

My first testicular graft upon senile animals bears the date of May 7, 1918.

The animals serving for the experiment were two old rams, black, aged about 10 years, bearing the Nos. 12 and 14, and two young rams, aged 6 months.

Ram No. 12 had horns twisted twice; No. 14 had them twisted three times. Both animals were of wretched aspect, old senile creatures; hair scanty; entirely wanting in places; a shrinking attitude, emaciated bodies, hesitating halting steps, dull sight and hanging head.

No. 12 appeared to have reached the extreme limit of the age possible for a ram to attain. His limbs trembled and he suffered from incontinence of urine due to the senile decay of the basicular sphincter. The peasant, living in the country near Nice, from whom I bought the animals, assured me that these old creatures had been incapable of re-production for two years.

The operation was first performed upon the young rams from whom the testicles were removed and afterwards kept in sterilized compresses. The intervention was then continued upon ram No. 14. His two vaginals were opened and I attached to each testicle one of those of the young rams, divided into 6 pieces. These fragments were fixed to the testicle of the old ram by some stitches in catgut; in such a way as to have no point of contact between them. It was found impossible to close the vaginals owing to the presence of the grafted fragments so the other tunics and the skin could be closed.

For No. 12, the procedure was different. A single incision was made in the right side of the scrotum; the vaginal was uncovered and preserved intact. It was upon the vaginal itself slightly irritated by some scarifications of the scalpel, that a young testicle was fixed, divided into four fragments, sufficiently separated one from the other.

Results of the operation very simple. Fragments of each grafted testicle were retained for histological examination by Retterer. This examination showed them to be still in the pre-spermatic stage when some tubes of 0 mm. 15 calibre, consisting of several rows of epithelial cells with neither spermatides nor spermatozoides. I draw attention to this fact, because in the periphery of the fragments grafted upon ram No. 12, and removed 14 months after the operation. Dr. Retterer found "some seminipars of which the centre and the average assises are occupied by some small nuclei and some flattened

ovoid filaments all having the morphological and color characteristics of the heads of spermatozoids."

As the testicular fragments grafted were obtained from a young ram as yet possessing no spermatozoides, these latter must have been developed in the grafts with evidently continued progressive evolution in their new home.

No better proof could be produced, not only of the survival of the graft after a period exceeding one year, but also of the fact that it can, at least in the best nourished cortical parts, pursue its normal evolution. To begin with, a change in their bearing was observable about two months after the graft; their apathy, their depressed and broken down, their dull look gave place to a vivacity of movement and to a combative and bellicose disposition.

Their vigor increased considerably from month to month. Their wool became glossy, their eyes bright, and their former indifference in the presence of the female gave place to an impetuosity, and to juvenile ardor.

The incontinence of urine of No. 12 completely disappeared.

Isolated in separate pens, each with a female, they copulated, No. 12 was incontestably the father of a lamb and No. 14 of two, born in 1919 and 1920.

At the present time, more than four years since the graft, they give proof of an equilibrium of health and of remarkable vigor. No. 12 permits us to observe, not only the rejuvenation incontestably resulting from the graft of young testicles, but equally, the possibility of successive rejuvenation.

Indeed, at the end of 14 months, when we removed the grafted testicle fragments, the animal still preserved his fine condition for some time, then he declined once more. His appetite diminished, his vivacity disappeared, his eyes became heavy, his head, once held so proudly aloft, once more hung down, and incontinence of urine reappeared as marked as before.

We then attempted a new graft on June 7, 1920, transplanting upon each vaginal two fragments of a testicle borrowed from a ram, No. 99, aged 3 years. The effect of the new graft was not manifested so rapidly as the first time, but from the month of January, 1921, one could observe a more lively manner, a better appetite, and some months later, there remained no trace of his senile condition, no more incontinence of urine, and no more trembling in the limbs. Once more we saw the superb animal holding his head aloft, and he can still be seen today in splendid condition. The graft then, can be renewed, and successive rejuvenations can be obtained; we have repeated this experiment several times upon other old animals and have noticed the efficacy of the new grafts. We possess, then, in the testicular graft a powerful means of combatting the senile state, which is due to the insufficiency, or to the suppression of the internal secretion of the testicles, and the manifold experiments analogous to those made upon rams Nos. 12 and 14, have confirmed me in this opinion. I believe myself, therefore, justified in applying to man a method largely employed upon animals. I have been assisted in the work by Doctors Didry, Mouthard and my brother, Doctor Georges Voronoff.

Testicular Grafts Upon Men

My first graft upon a human subject is dated June 12, 1920. The matter terminated, at the end of three months, in a check due to certain particular operative circumstances. This first endeavor remains, nevertheless, really significant, for it proves in an indisputable fashion the effect of the testicular hormone of monkeys upon the human organism.

The patient was a man of 45 years, deprived entirely of his testicles due to tuberculosis. The left testicle was removed at 23 years, and the right at 26, his aspect in general was that of an eunuch; face flabby without any beard or moustache, hanging cheecks, loose flesh, obesity very pronounced and voluminous breasts.

I grafted on him under local anesthesia the testicle of cynocephale monkey, divided into four pieces. To accomplish this, I opened the empty scrotum on the right and on the left and introduced two fragments on each side. On the sixth day after the operation, I was obliged to extract the stitches from the left side owing to the suppuration which only ceased at the end of a month No suppuration manifested itself on the right side, but three months after the intervention a serous effusion appeared, and the wound was re-opened. Considering the graft compromised, I removed it partly mortified, though adhering strongly to the surrounding tissues.

To what causes must this setback be attributed? To the unpropitious soil? That is my opinion—a latent microbism at the base of the scrotum, where a tuberculous suppurating process had previously necessitated surgical intervention.

I verified the case in a similar case, June 21, 1920. It also concerned an individual deprived of his testicles owing to tuberculosis, and not withstanding the fact that the area affected by suppuration had been removed 15 years before, the grafts placed in the scrotum awakened latent microbism and provoked suppuration.

There would be little interest in relating to you these two setbacks, which could in no wise be laid to the charge of the grafts, if I did not want to draw your attention to a singular fact.

During the three months that the grafts remained in the right vaginal of the first patient, where they adhered very strongly, the beard of this person commenced to grow and, although shaving had been left off for twenty years, he was obliged to begin again.

I am gratified to be able to report such an interesting detail to you, for it would only be possible to observe such a fact upon a castrated person, in whom the deprivation of testicular hormone always produces the loss of the hairs of the face.

My third graft of monkey's testicles on a man was carried out on the fourth of November, 1920, the patient being 59 years of age. In his youth, at the age of 19, he had contracted a severe blennothage which lasted more than a year, complicated by epididymitis, then by abridgement and then by prostatitis, with seven or eight relapses, the last in 1910. The patient complained of loss of memory, of a decrease in his capacity for intellectual work, and of physical depression. Sexual activity had become almost nil for 8 years.

As usual, the operation was preceded by the removal of a single testicle from the monkey. But as the animal died under the anesthesia, a very rare occurrence, since these creatures support chloroform very well, I removed the two testicles; and divided one of them into two, the other into four fragments.

Under novocain anesthesia I exposed the left testicle. The halves of the monkey's left testicle were grafted upon the human testicle; each fragment fixed by each of its two extremities with a stitch in catgut and placed in such a way that its glandular face was directly opposite to thhe vaginal previously soarified with the scalpel. The skin was sewn with silk. A second incision to the right displayed the right testicle, upon which the four fragments of the second testicle of the monkey were grafted, following the same technique.

During the months immediately succeeding the operation, two fragments out of the four grafts were eliminated. I believe the cause was that the fragments were

not sufficiently removed from each other. I am still in communication with this patient. His general state is much improved, and he now feels a physical wellbeing long unborn to him before the operation. He has passed two winters without the least illness, a matter of surprise, seeing that he was, during former years, very sensible to cold and frequently afflicted by bronchitis, colds and influenza; he has recovered his memory and a mental vigor. His sexual coldness continues. I emphasize this fact as very singular considering that the manifestation of sexual energy has been, in every other case, the first symptom the patients have remarked. May be the reason can be traced to the pathological state of the genital organs: testicles, prostate of the patients.

My fourth testicular graft from monkey to man was carried out on November 16, 1920, upon a celebrated dramatic author, of 61 years. He represented a most characteristic senile type, and had the appearance of an old man: flabby cheeks, wrinkled face, doubled-up body, dull eyes and senile circle round the cornea. Every physical effort proved painful, his steps lagged, his movements were slow. Save an occasional attack of malaria, he complained of no particular illness, but he had no appetite; felt a great lassitude, and took cold upon the slightest cause. But what troubled this man of exceptional intelligence was the weakening, not of his mind, but of the faculty of manifesting it. Thought had become slow; the happy expression hard to find; memory displayed gaps becoming more and more numerous. Total impotence for ten years.

I grafted on him under novocain the testicles of a large cynocepha! monkey, divided into eight fragments, carefully spaced around his testicles.

Twenty-three days after the graft the patient first experienced an erection. This fact surprised him all the more because he had hoped the graft would ameliorate his general condition only and had thought nothing of virile manifestations so long lost to him.

Since that time, the erections have been frequent. The patient recovered a virility such as he had about ten years before, and at the present moment, nearly two years since the graft, the manifestations of sexual energy continue.

His body has become well set up, the facial muscles more firm, the eye bright, and notwithstanding his white hair, he gives one a surprising impression of youth, vigor and energy. He resumed his former life; takes long walks, is assiduous as heretofore in his attendance at the theatre. But what crowns his joy is the facility with which he expresses his thought, and his renewed ability to work for long hours without fatigue.

My fifth graft from mokey to man is dated November 29, 1920, the subject being an American, 33 years old. Although he was not attacked by premature old age, he presented certain symptoms which I thought a testicular graft might ameliorate.

From the age of 23 his genital power was considerably enfeebled and during the last three years, the patient felt the sexual coldness of old age, an infirmity, which influenced his general state and mentality, engendering melancholy, a profound neurasthenia, fatigue, non-functioning of the intestines, burnings in the stomach, migraines, apathy, and ideas of suicide. The sick man informed me that he had had recourse on two occasions in New York to injections of testicular extract and each time experienced improvement in his general condition; disappearance of constipation, migraines, etc., but this improvement lasted for a very little time after the cessation of the injections.

This opotherapique proof strengthened me in the conviction that the patient might benefit by the testicular graft.

The testicle of a large cynocephale monkey was divided into halves, and each half grafted upon the testicles of the patient. About three weeks after the operation the patient reported a great mprovement in the functioning of his intestines. He declared that his hair fell less. No great change from the point of view of sexual energy. The patient left Paris and I did not see him for a year. He told me that during the first six months after the operation, his state of depression was much relieved, though slowly, but that his lack of sexual ardor continued. He noted an improvement in the functioning of his intestines. As the result of a romantic love affair, his virility returned, his depression gave place to an appreciative humor, and when I last saw him he enjoyed a perfect state of health, which he attributed to the graft.

Upon my remarking that his romance might have played a more important rôle than the graft, the patient responded drolly that, since the age of 23 years, it was not idylls that were wanting, but virile manifestation, for they had always been at fault.

My sixth graft was performed upon a South American, aged 66 years, on December 24, 1920. His state of senility was perhaps aggravated by an ulcerated stomach from which he had suffered, for 8 months, some two year before. Depression, physical and mental, virility very enfeebled and restricted to very rare and incomplete manifestation. Graft of testicles taken from a large cynocephal monkey, divided into halves and fixed upon the vaginals of each of the patient's testicles.

Three weeks after the operation, the patient experienced two erections at an interval of some days, the second appearing more energetic than the first.

Eight days later, the patient experienced frequent erections during the day.

February 3, 1921, the patient marked further erections more and more frequent, and particular energetic. He felt a physical well-being which induced him to augur happy consequences from the graft. He returned to his country and I only saw him twenty-two months after the operation. He told me he had greatly benefited by the graft up to the month of February last, as much from the physical point of view as from the mental, but since then, a new gastric crisis due to the ulcer in the stomach had much enfeebled him. Nevertheless, his genital force was still maintained superior to that it was before the graft notwithstanding the general depression occasioned by the gastric affection.

My seventh graft from monkey to man was practised upon the oldest of my patients, an Englishman of 74 years and the result is the finest I have yet known, whom I shall present to you here, offers, as you see, the aspect of a perfect English gentleman, vigorous, robust, endowed with that expression of energy which characterizes the Anglo-Saxon race. One would think him from 50 to 55 years and he is actually 76. In fact, two years ago, before the graft, Mr. E. L. appeared before me as an old man, inert, doubled up, obese, haggard in look, dull of eye, walking painfully with the aid of a stick.

Without taking his age in account—74 years—he had passed 30 years of his life in India, where he manifested a great activity, notwithstanding the depressing effect of the climate.

In addition, he had contracted small-pox in India and only two years before my intervention, he had undergone a lapartoing for peritonitis, and his convalescence had been retarded by pneumonia complicated by pleurisy.

On February 2, 1921, I grafted him under novocain with several fragments of a large cynocephale monkey, according to the accustomed technique. Rapid cicatrisation of the wound without incident. The patient left

Paris 12 days after the operation, and I only saw him eight months afterwards. My assistant and myself were literally stupified to see Mr. E. L. appear before us, half of his embonpoint lost, his aspect jovial, his movements active, his eye clear and twinkling roguishly in appreciation of our astonishment. The fat having vanished and the muscles stiffened, the body resumed its erect position and everything combined to give the impression of a man enjoying magnificent health. He bent his head, and we could see that he did not exaggerate when he said his cranium was covered with a thick down.

He was returning from Switzerland, where he had made several ascents, and indulged in the sports beloved of Englishmen. This man had really recovered 20 or 25 years of lost youth. His physical and intellectual condition state, his virility, all had been radically changed under the action of the testicular graft, which transported a decrepit old man sexually impotent, pitiable, into a vigorous man, in the full enjoyment of all his faculties.

My eighth graft from monkey to man was performed the same day, February 2, 1921, and it was the same monkey which served for the two patients; each receiving one testicle.

This patient was 40 years old. At the age of 25 he contracted mumps, complicated at the end of some days by double orchitis.

An examination of sperm directly after this illness, revealed a diminution of the number and of the mobility of the spermatozoides. But the patient noticed nothing very abnormal in his condition until about the beginning of the year 1918. At that time he commenced to fall into a state of apathy, of indolence, and complained of a diminution of physical and intellectual activity. His erections became less frequent and less vigorous. A second examination of sperm showed the spermatozoids few in number. The patient declared himself to have become almost sexually impotent.

The graft was accomplished according to the procedure already described, and the results of the operation presented nothing in particular.

On February 25 the patient felt an improvement in his general condition; better appetite, more tonicity; less fatigue. Slight increase of virility.

On March 14 the patient experienced erections a little more durable and energetic.

I have never seen this patient since, nor have I received news from him.

From the month of February, 1921 up to the month of March, 1922, I had been unable to procure any large monkeys, and consequently practised no testicular grafts. At last in March, I received some of the antropoid apes I always wished to have—chimpanzees, the superior monkeys most nearly approaching to man.

I have made further grafts, but as the operations are so recent, I feel myself unauthorized to speak of the results, the proof afforded by time at present being wanting.

What I can tell you up till now is that the first observations made concerning these new operations appear to support the hypthesis that the organs of the chimpanzee constitute the best material for grafts on man, being much superior to those furnished by the cynocephales. Indeed these the testicles of these last named animals are not always tolerated by the human tissues while this toleration is absolutely perfect in the case of the testicles of the chimpanzees.

Indications of the Testicular Graft

The number of facts observed up to the present time is too limited for one to draw up precise indications for every case of testicular grafts from monkey to man. What appears established is its efficacy in senile conditions, resulting not from affections which deteriorate the essential organs of our organisms; but from senility due to the insufficiency of the internal testicular secretion. One must admit there is a close relationship between age and the condition of the sexual gland in man as well as in woman.

The appearance of the secondary sexual characteristics proper to males takes place only at a specified age; namely—at puberty—at the time when the epithelial cells previously undifferentiated begin to elaborate the spermatozoids. Senility, on the contrary, coincides with the disappearance of these spermatozoids, due to the degeneracy of seminal celles.

On the other hand, the loss by operation of testicles before the age of puberty, that is to say before the organism has received testicular hormone, hinders the appearance of these secondary sexual characteristics of the male, causes the senile circle of the cornea to appear at 35 to 40 years, and transforms young men into old ones with neither force nor energy.

I do not claim to solve the problem of senility in attributing it to a single cause: namely—the diminution or the disappearance of the internal secretion of the genital glands. But what seems certain is that, outside of pathological causes which may determine organic changes, our forces, our physical and moral energy are bound up with the activity of the sexual glands. It is then logical to admit that in supplying the testicular hormone to the organism which at puberty causes the secondary sexual characteristics to make their appearance and which during life stimulates force and energy—it is logical, I say, to admit that in furnishing this substance to the organism at the moment when its own glands no longer elaborate it, we really rejuvenate that organism, taking the word, "rejuvenate" in the sense of increase of energy and of force.

My testicular graft upon the aged leave no doubt in this respect.

Procedure in Operating

I have made, up to the present day, more than 150 testicular grafts upon large animals, in addition to those performed upon human subjects. I have transplanted the testicular fragments almost everywhere: under the skin, under the muscles, under the peritoneum, in the abdominal cavity, on and the vaginal tunic, on and in the testicles, and have remarked that the choice of the place for the graft plays a capital rôle.

One must bear in mind that the graft passes through a critical phase during the first days after its implantation.

In fact, for a certain time, it remains without vascular connections, and thus deprived of nutrition, mortification lies in wait for it. Its vitality must during this time, be maintained by a nutrition otherwise than vascular circulation; its nutrition must be effected by imbibition. Now, this imbibition is ill performed under the skin, and under the muscles, and is found infinitely more assured in organs very vasculated, and above all in vases closely surrounded by membrane, such as the periton or the vaginal tunicle.

An exudation of sanguine plasma is made owing to the irritation caused by the graft, and this plasma nourishes the grafts and so saves them from perishing until

(Concluded on page 324)

Chronic Myocardial Disease

EDWARD E. CORNWALL, M.D., F.A.C.P.,

ATTENDING PHYSICIAN, NORWEGIAN AND WILLIAMSBURGH HOSPITALS; CONSULTING PHYSICIAN, BETHANY DEACONESSES AND BROAD STREET HOSPITALS.

Brooklyn, N. Y.

Chronic myocardial disease has always entered largely into human morbidity and now seems to be on the increase. Some of the reasons for this increase can probably be found in the constantly accelerating pace of civilization. That phase of the subject invites discussion, but we will pass it over, confining these remarks to certain phases of the etiology, diagnosis and treatment of the disease.

In recent years a flood of light has been thrown on the etiology of chronic myocardial disease by the discovery of the relationship between septic foci outside of the heart and pathological changes in the myocardium; and on its diagnosis, by the revelations made by the graphic methods of examining the heart beat. We now know that infective micoorganisms as well as slow acting toxemias, proceeding from an extra-cardiac source, such as an abcess tooth or a chronically infected tonsil, gall bladder, appendix or prostate gland, often cause myocardial disease; nor can we doubt that similarly acting toxemias may result from the absorption of the products of bacterial activity in the alimentary tract under certain conditions. And the cardiac arrhythmias, which formerly were classed as functional disorders of the heart, are now looked on as signs of pathological changes in the heart, which, in the case of some arrhythmias, are regularly pathognomonic.

The bright light of these newer cardiological conceptions tends to throw somewhat into the shade the older learning accumulated in the not inglorious period of cardiology which antedates the electrocardiograph and the hue and cry against the teeth and tonsils, and it behooves us to safeguard our sense of relative values in this connection. While septic foci should be zealously sought out and arrhythmias identified, other etiological and diagnostic factors should be investigated and evaluated no less earnestly. The history should be searched for involvement of the heart in general infections, for errors in diet, for physical and mental overstrain and for hereditary factors. The special senses should be trained in procedures of physical examination which can reveal alterations in the area of cardiac dulness, irregularities in the cardiac action, changes in the regular heart sounds, adventitious sounds connected with the heart beat, and signs of arterial sclerosis; and the judgement should be cultivated in the interpretation of these phenomena, as well as of subjective symptoms, such as dyspnea, pain and other abnormal sensations in the precordium and elsewhere, abdominal symptoms, nocturnal symptoms and symptoms of unusual fatigue. A trained judgement acting on all the data obtainable is required for diagnosis, and that often fails to make a clear cut pathological diagnosis. There is nothing which can take the place of the trained judgement.

In noting the great prestige of the cardiac arrhythmias it is interesting to compare broadly that group of signs with the group of endocardial murmurs. The arrhythmias generally are evidences of disease or malnutrition of the heart muscle, some being pathognomonic of structural changes and others not so. Some murmurs likewise are pathognomic of permanent valvular deformities and others not so. Auricular fibrillation auricular flutter, heart block and alternation of the heart regularly mean degenerative changes in the myocardium; paroxysmal tacchycardia and premature contractions vite suspicion but are not pathognomonic, and sinus arrhythmia is a manifestation of vagus disturbance. Diastolic murmurs are regularly accepted as meaning organic valve disease. Sytolic murmurs depend for their meaning on other signs and symptoms, according to which they may mean a deformed valve, acute or chronic myocardial degeneration or malnutrition, cardiac incoordination or disease of the aorta. Murmurs generally require for their interpretation a more extensive context than do the arrythmias, being less immediate in their pathological significance; even if a valvular defect is indicated its pathological importance is largely determined by the state of the myocardium. Just as systolic murmurs which are possible from muscular incoordination, may be functional, so, analogously, may premature contractions which require for their production increased irritability, absolute or relative to impinging stimuli, be functional.

In the differential diagnosis of chronic myocardial diseases the proper estimation of the subjective symptoms often presents difficulties, especially if accompanied by abnormally high or low blood pressure and non pathognomonic arrhythmias. The fact that this differential diagnosis is often called for at an age when both myocardial disease and disturbance of the endocrine balance are apt to occur increases the difficulty. Symptoms of myocardial exhaustion may or may not indicate serious myocardial disease.

The prognosis of chronic myocardial disease is a matter of considerable uncertainty except in the obvious and advanced cases. The possibility of removing a continuously acting cause, especially if it is a septic focus, brightens the prognosis. The character of the treatment is an important factor. The prognosis is often better than it seems.

The treatment is for the most part indirect: removal of causes, diet, rest, exercise, exhibition of heart stimulants when notable cardiac failure is present or imminent, and relief of secondary symptoms.

Cleaning out septic foci and regulating the diet and activities are fundamental procedures. In dealing with septic foci, it is well to give proper consideration to the possible dangers which might result from too radical or premature action, and to the contraindications to operation which might exist. In regard to diet, it may be said that the requirement of adequate nutrition of the heart muscle can usually be met without pushing superalimentation, and that the diet which is best for the patient as a whole is apt to be best for his myocardium. In general, the diet should be easy, regardful of subnormal functional activity of the mechanisms of digestion, assimilation and elimination, as well as of cardiac irritability and special sensitizations. Various degrees of heart failure present special

dietetic indications, the higher degrees calling often for very great restriction, not only of solids, but also of fluids and salts. The effect of a properly regulated lactovegetarian or approximately lacto-vegetarian diet in lowering high blood pressure constitutes a particular reason for giving a diet of that character in many cases of chronic myocardial disease.

Rest is the remedy par excellence. Restriction of activity is not always easy to adjust to the case. Extensive exhaustion of reserve force calls for rest in the horizontal position. Here the question comes up, how long should patients be kept in bed? It is the writer's opinions, based on observation, that the error is commonly made of not keeping them in bed long enough. A distinction can generally be drawn between cases complicated with organic valvular disease and those without that complication: the former, as a rule, require a longer stay in bed than the latter, in relation to recovery of reserve force, because of the necessity for development of compensatory hypertrophy. A good general rule is to keep patients in bed until a considerable time has elapsed after recovery of compensation for the horizontal position and after heart stimulant drugs have been discontinued. But in many cases of chronic myocardial disease with reduced reserve force some degree of activity out of bed with moderate heart stimulation may be allowed. The regulation of the amount and duration of the restriction of activity calls for the physician's best judgement; it is generally better to err on the side of giving too much rest than too little. The danger of weakening the heart muscle by prolonged rest in bed is often exaggerated. In these moderate cases much good may be done by specific directions for regulating muscular activities. The patient may be required to live on one floor, to limit his activities to going up and down stairs once in twenty-four hours, to take considerable time in going up a flight of stairs, to gradually test his power by going down and up one step more each day or so until the entire flight of steps is accomplished, to walk on the level out of doors for specified distances, to go to business in a surface vehicle, etc.

The importance of mental rest in the treatment of this condition cannot be overestimated. Sleep, which is often easily disturbed, should be cultivated, and long hours of sleep sought. The patient should be protected from worry and responsibility as much as possible. Except in the more advanced stages of the disease it is usually best for the patient to occupy himself with his accustomed business, particularly the routine part of it, shifting the responsible part to others as much as possible; for the giving up of accustomed business and the devoting of oneself exclusively to taking care of ones health, favors a depressed state of mind which reacts badly on the heart; the physician must often recommend the lesser of two evils. Long vacations, especially in new and pleasant surroundings, with as much light, out of doors exercise as the patients heart condition permits, are strongly to be recommended in the less severe cases. It is surprising how much physical exercise in certain lines can be taken with advantage by some of these patients. Formal exercises, however, have a less important place in the therapeutics of chronic myocardial disease than the amount of literature which has been devoted to them would lead one to suppose. In general, it may be said that the regulated activities of ordinary life supply sufficient exercise. Massage is often of value for psychical as well as physical reasons; but in prescribing it the masseur should be warned against manipulating the patient too vigorously.

Direct stimulation of the heart is required sooner or later. To use heart stimulant drugs to the best advantage is a fine therapeutic art. A common error, and one easy to fall into, is to use these drugs unnecessarily and excessively. Diminished myocardial reserve power is not necessarily an indication for their use; restriction of activity is often sufficient to meet the indications presented; although in cases where the reserve power is much diminished it may be proper to safeguard it by the use of these drugs; and the rule that these drugs should only be given in cases with exhaustion of reserve power which rest alone will not correct, can often be waived in chronic myocardial disease; they can be given in selected ambulant cases.

The general indication for the use of heart stimulant drugs is myocardial insufficiency, but in cases associated with auricular fibrillation or flutter a special indication is present for the specific heart blocking action of the digitalis class of drugs. The drugs of this class produce, in doses within the therapeutic range, a blocking at the auriculo-ventricular bridge. This blocking in auricular fibrillation protects the ventricles from the excessively numerous impulses to contract which come to them from the auricles, and which take advantage frequently, irregularly and prematurely of the partially recovered contractility of the ventricles, thus producing the absolutely irregular ventricular action characteristic of auricular fibrillation. Digitalis in full doses converts auricular flutter into auricular fibrillation, while producing its heart blocking effect.

This special indication for the use the digitalis class of drugs must be kept distinct from the general indication for the use of heart stimulants. Not all cases of myocardial insufficiency require heart blocking. The rules for dosage differ in the cases presenting that special indication and those which do not. When a therapeutic heart blocking effect is wanted, the required dose may be as large as the patient can stand, that is, the drug may be pushed to the limits of toxicity. But when only a deficit in heart pump action is to be made good, the dose should be regulated by the degree of myocardial insufficiency. It is only in conditions associated with auricular fibrillation or auricular flutter that the heart should be fully digitalized, that is, subjected to a notable heart blocking effect of the drug. This point is emphasized here because in consequence of failure to differentiate properly the general and the special indications for the use of the digitalis drugs, it might well happen that cases of chronic myocardial disease which show myocardial insufficiency without auricular fibrillation, might receive unnecessary or excessive digitalization, with harmful results, (perhaps from too much heart blocking or too strong vagal stimulation).

Of the digitalis class of drugs, only digitalis and strophanthus need be considered, for the others are much inferior in therapeutic value. The action on the heart of these two drugs is similar. Mackenzie states that he "could never in practice detect any difference" in their action on the heart. There are, however, some side differences, so to speak. In this connection the writer wishes to call attention to the dosage of strophanthus recommended by him in previous publications, which he believes should

be preferred to that given in most of the text books.

Strychnine does not seem to be a direct heart stimulant, but it stimulates the inhibitory and vasomotor mechanisms; and it is a matter of clinical experience that patients with moderate degrees of myocardial insufficiency often appear benefited by its use in small doses.

Caffeine is an emergency heart stimulant of considerable value. It cannot be used for long periods in most cases, because of its disturbing effect on the nervous system.

Morphin, and morphin only, can alleviate the prolonged agony so often present in the final stages of this disease. Small doses given at regular intervals with strophanthus or digitalis are very effective in relieving dyspnea. Bromides also can be used to combat irritability and sleeplessness.

In concluding these brief remarks, which are intended to be suggestive rather than particularly didactic, the writer wishes to emphasize the following points:

Chronic myocardial disease is to a large extent a preventable disease, and to a considerable extent amenable to treatment.

For making the diagnosis skill in the ordinary procedures of physical examination and a cultivated clinical judgement are of paramount importance.

The prognosis is often better than it seems.

Especially important in treatment are proper regulation of diet and physical and mental hygiene. Septic foci which may be causative should be removed when practicable.

Full digitalization of the heart with the production of a notable degree of heart block is not required in every case of myocardial insufficiency calling for heart stimulation, but only in cases showing auricular fibrillation or flutter. When the latter conditions are present the dose should be large and may be given in a routine manner. In cases without those arrhythmias, however, the dose should be regulated by the degree of cardiac insufficiency and the capacity of the myocardium to make favorable response.

1218 Pacific Street.

REFLEX COUGH FROM NOSE AND THROAT CONDITIONS.

HAROLD HAYS, M.D., F.A.C.S.
New York.

Irritating coughs may arise from any number of nose and throat conditions and the amelioration of such a cough is not always such a simple matter. I have seen a patient who had a persistent, irritating cough which had lasted over a period of twenty years, no doubt due to some condition in the nose or throat and although everything humanly possible has been done for her, she still keeps on coughing. In all probability, in this case, there is some reflex condition present, such as an irritation of the phrenic nerves. It was surprising to note that she stopped coughing, at one time, for an entire year after the removal of her lingual tonsil.

As a rule the coughs which arise from a nose or throat condition are due to some inflammatory reaction of the mucous membrane of the nasopharynx, often associated with the accumulation of mucous or mucopus which clings to the pharyngeal wall until it is expectorated. The cough may be hard and dry or it may be a mucoid cough with a great deal of secretion. Many of these coughs are due to direct irritation but others are due to reflex irritation. Among the former may be mentioned the coughs arising from some inflammatory condition of the nasopharynx, pharynx or larynx with which some lung condition may be associated. Among the latter may be mentioned those coughs which are due to some pathological condition within the nose or nasopharynx or due to some hidden sinus disease.

Pathological conditions within the nose are often present which will not manifest themselves by any interference with breathing or by any continuation of colds in the head. There may be a marked deviation of the septum to one side and, on close inquiry, one may find out that the patient breathes out of one nostril better than he does out of the other. The mucosa over his deviation may be markedly thickened and there may be a sensation of fullness in this part of the nose. A second case of great importance is an hypertrophy of the middle turbinate bone which allows of an excessive secretion which is constantly dripping down into the nasopharynx. And thirdly the cough may be due to a polypoid condition of the posterior tips of the inferior turbinates. These can only be properly determined by an examination of the posterior parts of the nose with the nasopharyngoscope. Such growths go undiscovered for a great length of time. Their importance is manifest because they hang down into the nasopharynx, partially or wholly blocking it up and are continually secreting mucous. Lastly one must consider various inflammations or infections of the sinuses of the nose which do not manifest themselves in the ordinary way. One often has a patient referred to him with a cough and discovers, on transillumination of the sinuses that one or both or the antra are cloudy. The patient may make no complaint of the condition. When the antrum is washed out, a very simple procedure, the cough at once disappears, never to recur until an infection of the antrum again takes place.

It is hardly necessary to state here that diseased tonsils and adenoids may give rise to a reflex cough or one due to a direct cause. But one seldom appreciates the effect of an enlarged lingual tonsil in this connection. The lingual tonsil lies at the base of the tongue, directly in front of the epiglottis and when it increases in size, it has a tendency to tip the epiglottis backward, partially occluding the larynx. Irritation of the throat is set up because of this and because of the inflammatory condition of the lingual tonsil itself. The cough associated with this condition is usually dry and very distressing to the patient. It occurs most often in women, particularly in those who use their voices a great deal. The removal of the tonsil will cure the condition.

2178 Broadway.

Syphilis as an Economic Factor in Industry

J. M. Quirk, gives a general discussion of the history and prevalence of syphilis. Syphilis attacks every organ and tissue in the human body and simulates almost every known disease. Its lesions are not always easy to distinguish and the author states that they often have men reporting all sorts of injuries that are primarily due to syphilitic lesions. In its late manifestations with the involvement of the deeper tissues, we again have a serious economic charge against industry. The diseased bone of the syphilitic snaps in some slight injury and convalescence is prolonged beyond the normal limit.

The case of syphilitic aortitis dies from some slight injury—industry pays. A trivial trauma to the head may be followed by an epileptiform attack common to syphilis, and industry pays. A neurosyphilitic loses muscular co-ordination or mental concentration, an accident occurs and industry pays. What shall industry do? Encourage education and treatment. Lectures should be engaged, for lecturers are even more preferable than pamphlets, because many will listen to that which they are unwilling to read. The author recommends besides, prophylaxis and prophylactic education for industry.—(*Int. Jour. Surg.*, May, 1922.)

Malignant Disease of the Intestine

A. WIESE HAMMER, M.D., F.A.C.S.,

Philadelphia

Carcinoma and sarcoma of the intestines are far less frequent than cases of malignancy of the stomach, the smaller number of these malignancies, as may be inferred from anatomical relations and physiological functions, being much less common in the small than in the large intestine. Only about three per cent of all cancers of the intestine are found in the small bowel.

There are comparatively few cancers found in the duodenum or the jejunum. It is a moot question if duodenal cancer is a primary affection. Because of the close juxtaposition of the intestine, the gall bladder and the pancreas, it is an impossibility to positively declare as the disease has made extensive inroads, if the neoplasm had its genesis in the duodenal mucosa, in the bile ducts, or in the ampulla or the head of the pancreas. Upon one thing there seems to be quite unanimity of opinion and that is that duodena. ulcer probably never resolves itself into duodenal cancer. What is true of ulcer of the stomach does not obtain in ulcer of the duodenum. "At the present time," says Judd, of the Mayo Clinic, "the evidence to show that duodenal ulcer ever becomes malignant does not seem sufficient to warrant a consideration of its excision to prevent recurrence. It is possible that such ulcers will be excised oftener in the future, but the question of malignancy need not be taken into account."

There is nothing thoroughly characteristic of malignant disease of the duodenum. Almost any or all the symptoms characteristic of serious gastric trouble may be evidenced.

In a consideration of carcinoma of the jejunum, it is well to remember that that portion of the bowel is often the seat of polyps or polypoid growths and that these neoplasms are prone to undergo degenerative changes with a resulting formation of cancer. These polypi often exist as benign tenants of the bowel until forced down into the lumen of the intestine where they give rise to symptoms of obstruction.

The other form of carcinoma encountered in the jejunum is the ring carcinoma invading in a circular form the lumen of the gut. Upon opening the abdominal cavity in the presence of cancer of the jejunum of long standing, the surgeon may be mystified in seeing this portion of the alimentary tract possess a lumen quite as large as the lumen of the large intestine, but the explanation is quite evident when we consider that dilatation of the proximal loop of intestine with greatly thickened and hypertrophied walls is the result of repeated exertions of the individual to force along the partially digested food in the presence of this obstruction. The close proximity of the two portions of the bowel, i. e., the duodenum and the jejunum, no doubt accounts for the frequent reports of cancer of the duodenum, when the malignancy had its seat of origin in the jejunum. A line of demarcation is often difficult, so that the jejunal neoplasm is recorded as an extensive duodenal carcinoma. There are no characteristic symptoms, most surgeons agreeing that an exploratory incision is the only rational method of ascertaining the existence of the true condition.

In a summary of eleven cases operated upon at the Mayo Clinic between 1907 and 1918, E. S. Judd reports:

"Eight of these cases occurred in men and three in women. In most instances the patients had had symptoms only a few months, in some only a few weeks; however, in one case some intestinal symptoms had been present for twenty years, and in two cases symptoms had been present for two and three years respectively. The histories do not show great similarity, and it was almost impossible to diagnose the nature or location of the obstruction, but obstruction was present in every instance. Occasionally the tumors could be felt, although this was not helpful in differentiating. Abdominal pain was severe and colicky, and had occurred intermittently for some weeks. There was no definite localization of the pain, although it was most frequently in one or the other ilias fosae. Weight loss was very rapid, and in most cases was marked at the time of the examination." [1]

Carcinoma of the ilium is also an affection of vague symptomatology, the disease usually baffling all diagnostic powers, the x-ray revealing most often the presence of obstruction. To enumerate the symptoms exhibited would be to write a paper of disconnected manifestations of intestinal disease.

Greater in frequency than carcinoma of the intestines is sarcoma, and, although the disease must have occurred since the earliest times, it is not until around the year 1880 that the malignancy engrossed the attention of the profession.

At the Berlin Pathological Institute, where tens of thousands of specimens were collected in the sixteen years between 1859 and 1875, not a case of intestinal sarcoma was recorded. During a period of fifteen years, Smoler reports post mortems on more than thirteen thousand bodies from the hospitals of Prague with sarcoma of the small intestine in only 13. Libman, of New York, found among 42 cases, 15 involving the duodenum, 18 the jejunum and ileum and 3 the entire intestinal tract.[2] Only occasionally is the serous investment of the bowel attacked. The favorite seats of invasion are the muscularis and the mucosa. The sarcoma generally encountered is the lymphosarcoma, extending along the long axis of the bowel. Early in the disease the muscular coat suffers a paralysis, allowing of stagnation of the feces and an accumulation of gases. This intestinal dilatation is a quite constant symptom. From mechanical means the neoplasm may engender pressure symptoms; thus, we may encounter compression of the vena cava, the biliary passages, etc., with resulting characteristic symptoms.

The symptomatology of sarcoma of the small intestine conforms closer to a systematic recognition of important data than does carcinoma. The earliest symptoms are usually set down, though transitory in nature, as anorexia, nausea and vomiting, with the occurrence of abdominal pain. The abdomen becomes distended, the patient appears haggard and anemic and a neoplastic growth is usually, but by no means always, palpable.

Distension of the abdomen is an important and characteristic sign. This distension ofttimes comes on most suddenly and points to the true nature of the invading neoplasm. It may be caused by peritoneal involvement, tympanites or pressure on important vessels. The sarcoma when of large size, may of itself produce the marked distension.

[1] Journal-Lancet, 1919, xxxix.

[2] Mit. aus. Grenz. der Med. u. Chir., Ch. vii, 4-5.

The tumor while not, as a rule, extensive in size, appears to the examining hand as irregular and nodulated. It may be superficial or deep and is usually not tender. It may arise from any part of the intestine, usually grows backward and when originating in the lower abdomen, rectal examination may reveal the tumor where palpation above has failed to elicit the presence of the growth. Gastric symptoms, such as anorexia and vomiting, are not uncommon, and in the epigastric region, pain may be complained of. The chief symptom as relates to the intestines is the persistence of a diarrhea.

The following conditions, according to Libman, may be found in conjunction with a study of this class of cases: (a) Cases in which the true condition is revealed at autopsy. (b) Cases in which the symptoms—the obstruction or the tumor—divulge the true nature of the affection. (c) Cases which are first announced by obstruction or perforation. (d) Cases corresponding to tuberculous peritonitis without demonstrable tumor. (e) Cases ushered in with jaundice. (f) Cases that strongly partake of the nature of ovarian cyst or appendicular involvement.

The colon is not infrequently the seat of carcinomata, different varieties being constantly distinguished by microscopical research. The sigmoid is the portion most often affected, although the colonic flexures, the transverse and the ascending part, are by no means exempt. When the scirrhus variety of carcinoma is present, early stenosis results and hence operation is then undertaken when the invasion of the disease has not allowed of a hopeless prognosis. It can be safely stated that carcinoma of the colon gives a better prognosis than malignancy in any other part of the intestinal canal.

The patient afflicted with cancer of the colon is usually unaware of the inroad of the disease until he consults his physician about a diarrhea with pain, bleeding and sometimes a fetid discharge, the progress and the intensity of these symptoms being dependent upon the extent and the depth of the ulcerating process.

The splenic flexure seems to be rather exempt from cancerous invasion, but when it does occur the scirrhus variety seems to predominate. From its anatomical position, adhesions to the neighboring parts are quite common; these include the stomach, spleen, small intestine, lower part of the duodenum and the tail of the pancreas.

These cases are almost impossible of early diagnosis, hence the clinical course is difficult to follow; so that cases are recorded where individuals apparently healthy have been seized with symptoms of intestinal obstruction and sudden death. In other instances the disease progresses with little intestinal disturbance, and the patient becomes thin, weak and anemic. Because of the position and fixation of the part, cancer of the splenic flexure is most often impossible of recognition by means of palpation. If the tumor be of such massive size as to be appreciable to the examining hand, it may be safely inferred that the growth is too large for removal.

Strange to remark that, even when the abdomen is opened, the surgeon may fail to recognize the presence of the neoplasm. This is due to the fact that when the growth is small, the fixation of the part to the posterior abdominal wall makes the diagnosis rather inconspicuous. The surgeon must now carefully palpate, so as to discover the tumor, which may be small and retracted toward the posterior abdominal wall. These growths destroy life by intestinal obstruction, by perforation, or through sheer exhaustion of the patient.

Carcinomata of the cecum present nothing of special interest that has not been mentioned heretofor. There is sometimes much difficulty in distinguishing malignant disease of the cecum from tuberculous typhylitis in this region. In cancer the progress of the stenosis runs a more rapid course. The tumor has less the form of the cecum than is the case with tuberculosis. By many, a search for the tubercle is considered irrational, as it is only found in the ulcerated form of the malady.

Distinction must be made between malignant disease of the cecum and acute attacks of appendicitis. In malignant disease the onset is slow, colicky pains due to obstruction, constipation, followed by or alternating with diarrhea. No elevation of temperature, mucous and blood passed by the bowel; the patient becomes weak, suffers loss in weight and is anemic.

Three-fourths of the tumors of the intestinal tract are to be found in carcinoma of the rectum. The type of carcinoma most common is the adenomatous variety, although the medullary, scirrhus and the so-called gelatinous types are encountered. The most common seats for cancer of the rectum are just above the anus or in the upper portion near the sigmoid. Any part of the rectum, however, may be involved.

The growth may be very limited as when a small plate of cancerous material is found lying on the rectum; or one surface may be involved; or, again, the growth may be massive encircling the entire gut, and thus obliterating the normal lumen. The free surface of the neoplasm bleeds easily and its superficial part is prone to undergo a necrotic disintegration. When proliferation takes place, fistula formation with adjacent organs is likely.

Another malignant tumor affecting the rectum is the epithelioma, but its event must be regarded as being secondary; its primary focus having been at the anal region and the malignancy has sprung from the squamous epithelium at that location. These epitheliomata are flattened growths, nodular, without a pedicle, occupy a part of the anal circumference or completely surround the orifice and are prone to ulcerate.

Primary sarcoma is rarely found in the rectum. Secondary invasion, as would be supposed, is not rare, and is a metastatic expression of sarcomatous growth in some other pelvic organ.

All surgeons agree upon three types of primary sarcoma that may be encountered in the rectum: (1) The lymphosarcoma. (2) The spindle-cell sarcoma. (3) The melanotic sarcoma.

The lymphosarcoma is rarely found in the rectum; its common seat is in the small intestine where it takes root from the lymph follicles. When it is found in the rectum, the growth disposes itself lengthwise, and does not produce cylindrical thickenings as in carcinoma; hence, it is not likely to effect the lumen of the gut.

The spindle-cell variety may exhibit pedunculated masses that project into the lumen of the gut but, as a rule, behave more like the lymphosarcoma, in not narrowing the lumen of the bowel.

The melanoma is the common variety of sarcoma found in the rectum and while this growth is by far the most frequent of all sarcomata of the rectum, its occurrence is only slight as compared to the enormous number of carcinomata found in this por-

(Concluded on page 320)

The Task of the Syphilis Clinic From a Social Point of View

A. N. THOMSON, M.D.,

OF THE AMERICAN SOCIAL HYGIENE ASSOCIATION AND THE COMMITTEE ON DISPENSARY DEVELOPMENT.

New York

Venereal disease clinics have made rapid strides during the past few years in the treatment of the disease from a medical point of view. There has been a marked growth in the number of such clinics and in the size and quality of their personnel. In the field of organized charity this steady improvement is of especial interest to the family case worker, whose concern in the venereal disease situation is deep, due to the number of cases which she meets in the home, and the fact that her one responsibility when a case is discovered is to bring the patient into touch with responsible medical authority. However, up to the present time, due to mutual misunderstanding as to their respective fields of operation, there has been considerable lack of co-operation between family case worker and clinic with respect to the individual patient in whom both are interested.

With a growing realization of this, the Charity Organization Society of the City of New York, in 1920 undertook to make a study of its venereal disease problem in relation to the general situation in the city. The investigation was carried on by a research worker under the direction of a special Subcommittee on Venereal Disease, consisting of Mrs. Richard Childs, Chairman and a member of the Executive Committee; Miss Veronica Wilder, Assistant Superintendent; Mr. Oscar Lowenstein, lawyer and a member of the Committee on Co-operation and District Work; Miss Clare M. Tousley, Secretary of the Committee on Co-operation and District Work; Miss Elizabeth Dutcher, a district secretary, all of the Society, and the writer.

Fifteen syphilis clinics and hospitals were visited and interviews were held with the doctors and social workers attached to each. This phase of the study revealed many interesting points regarding the interrelationship of clinic and family case worker in the handling of the venereal disease patient.

Chief among these was the clear indication that family case workers do not maintain the proper relationship to the doctors at the clinic. Instead of acting merely as scouts for the medical profession in the home, discovering the patient and bringing him to the doctor for examination, they usurp medical authority by ordering Wassermann tests without explanation, or even themselves making a definite diagnosis of venereal disease. They often confuse the moral and medical issues and do not realize the confidential nature of a venereal disease diagnosis. Properly, the doctor resents this and quite naturally refuses co-operation of any kind.

But granted that the relief agency social worker functions properly in these respects, what has she the right to expect in the way of medical assistance for the patient? There should certainly be a sufficient number of clinics available to handle the flow of patients, and their fee should be reasonable. However, such is not the case in New York. There appear to be only nine night clinics in Manhattan and two in Brooklyn, and only one of these will guarantee free treatment to all without question. This is located at one end of the Island, so that it is most inaccessible for uptown patients. Only one of these night clinics will take specimens for such Wassermann tests as may have been ordered by private doctors or other specialized clinics.

Thus it is practicaly impossible for a man who has to work during the day to secure this except by taking time off from work. The fees at these clinics range from $1.25 to $3.00 for Salvarsan and this is almost prohibitive to a great number of patients. Even the facilities in the day clinics are not adequate to guarantee that the patient can see the doctor within a reasonable length of time and be entitled to some degree of privacy. The majority of the large clinics have a staff of only two or three doctors to handle fifty to one hundred cases daily, and their work is often carried on in one, or at best, two rooms. Preliminary examination, Wassermann tests, Salvarsan and mercury treatments must be given alike in these congested quarters to men, women, and children in the order of their admission. Not only this, but there is generally only the provision of one or two tables for treatment purposes. It is small wonder that a syphilitic mother, forced to bring her baby with her to the clinic, who is made to wait two or three hours to see the doctor, cannot be persuaded to return. And even granted that the facilities are adequate, the scarcity of doctors means that the patient can receive little or no individualization.

Too often his treatment consists, like that of the other patients in the clinic, in a definite course of Salvarsan and mercury injections with a regulation periods of rest. No matter what his individual requirement may be, there is no divergence from the routine. A new element of routine handling is now becoming prevalent in those clinics where, with only nominal supervision from the doctor, the handling of the injections is taken over by a nurse. The doctors, in the rush of their work, have little time to explain to the patient the nature of his difficulty or to inquire into its relation to the welfare of the family or the protection of the community.

This educational work cannot be handled properly because of the lack of medical social workers attached to the clinic. The one or two such workers at present found in the majority of these clinics are too busy with clerical work to properly individualize the patient or look into family conditions. Thus in many cases no examination is made of the husband or wife and children of the infected individual. Successful treatment is further hampered by lack of bed provision in the hospitals for the doing of spinal tests, and the lack of proper laboratory facilities. It is therefore often a question of months before such tests can be taken and days before their result can be ascertained. There is also little hospital provision for cases requiring either close observation or specialized treatment with poor correlation between the various specialized services, such as the eye or throat clinics, and that of the venereal disease department. In many cases the special services do not recognize the venereal cause of a local condition or refer the

(Concluded on page 320)

Medico-Legal Aspects of Confidential Communications*

Louis H. Solomon,
New York

The subject of this paper was inspired by the interest created in the so called "confidential communications", as the outgrowth of a question arising in the now, more or less, notorious case of Stillman against Stillman, pending in this State, with which we all have some acquaintance, in spite of ourselves. You will readily recall that this case was an action for absolute divorce brought by the plaintiff husband, against his wife, alleging adultery, which under the laws of this State, is the only ground upon which an absolute divorce can be obtained. As an element of his proof, the plaintiff put on the witness stand, an osteopath, who testified that defendant admitted to him in the course of a professional visit, that the plaintiff husband was not the father of her infant child. Objection was raised by defendant's counsel to the admission of this testimony on the ground that it was a "confidential communication", within the meaning of law, and entitled to protection from disclosure on the witness stand.

The issue thus raised a phase of the subject of "confidential communications"—a subject fraught with greater importance to the two major professions represented by this institution, than appears at first blush, and this paper is the product of an endeavor to bring understanding out of the sometimes confused and more often erroneous statement of the principle in the lay discussions generated by the interest recently aroused.

It may be stated as a general rule, with the exceptions to be hereafter discussed, that the law recognizes no confidential statements, exempt from disclosure on the witness stand. Bankers have been compelled to disclose the confidences of their clients; merchants have been required to open their books to scrutiny on the witness stand, and to speak trade secrets and confidences without reserve. Even the mother has been compelled to give utterance to the secret confidences of an erring son that have sent him to the penitentiary. A promise to hold in strict confidence and not to disclose is treated merely as a promise to violate the law, and will not be enforced. The solemn oath exacted to insure secrecy in secret fraternal orders will not exempt the secrets from disclosure. No rule of law has been more rigidly or relentlessly observed and enforced in the development of the Common Law, sometimes, in the face of apparent hardships, involving serious sacrifices. In the eyes of the law, the regular administration of remedial and punitive law, in the enforcement of obligations, the protection of rights, the preservation of order, in civilized society, is paramount to any consideration of the inviolability of a communication made in reliance on personal confidence or on a fiduciary or contract relation.

To this general rule have been engrafted four very well defined and strictly confined exceptions, founded upon the strongest considerations of public policy. These exceptions, stated in brief summary are (1) confidences transmitted between husband and wife during marriage; (2) confidences transmitted by a client to his attorney in the course of professional employment, and his advice given pursuant thereto; (3) communications transmitted by a patient to his physician in the course of professional treatment; (4) confidences transmitted to a clergyman or other minister of religion, in his professional character in the course of discipline, required by the tenets of religion.

These are the four exceptions summarily condensed. They have been stated in the order of their development under the law. They have not been fully, or rather completely stated. As, however, each will be fully set forth before we dismiss the subject this evening, the possibility of error or confusion due to too brief a statement of the exception will be removed.

Professionally, we are not interested in the exception to the rule enumerated first, namely the confidence between husband and wife, but as some husbands here to-night might want to know how far they may, with impunity, relieve the conscience of evil committed professionally or otherwise by giving it utterance to a sympathetic wife, we will briefly discuss that exception.

The rule governing the protection of confidences between husband and wife during marriage dates back to the time when the "memory of man runneth not to the contrary". Under the early common law, the legal fiction existed that man and wife were one; that the legal identity of one was absorbed by the other and as a person was incompetent to testify in his own behalf and could not be compelled to be a witness against himself, husband and wife were unable to testify for or against the other. With the beginning of the disappearance of the legal fiction that husband and wife were but a single entity and the recognition of the separate existence of the wife, grave apprehension began to be expressed in judicial opinion for the safety and permanence of the institution of marriage and safeguards were being everywhere thrown about the relationship. Out of that growth there developed the present rule making confidences during marriage, between husband and wife, sacred and inviolable. The rule has, therefore, an independent existence at Common Law. In this State the rule has been incorporated into and is stated in the Code of Civil Procedure now replaced by the Civil Practice Act, in the following language.

"A husband or wife shall not be compelled, or without the consent of the other, if living, allowed to disclose a confidential communication made by one to the other during marriage."

Under the common law, as under the statute every confidence during marriage by either party to the other is protected; and the confidence falling within the privilege is protected for all time, even after the marriage has been dissolved.

The rule protecting a confession to a minister of religion has no existence at Common Law and is purely the creature of statute, except in those jurisdictions where the Canon, or Ecclesiastical Law took root. The rule in this State is set forth in Section 833 of the Code of Civil Procedure, now replaced by the Civil Practice Act, and reads as follows:—

"A clergyman or other minister of religion, shall not be allowed to disclose a confession made to him, in his professional character, in the course of discipline, enjoined by the rules of practice of the religious body to which he belongs."

*Presented before the Society of Medical Jurisprudence at the New York Academy of Medicine, October 10, 1921.

Being in derogation of the common law, the rule is strictly construed and unless the confidence comes strictly within the requirements established by the law, it will not be given protection.

With this brief statement of the exceptions before enumerated as the first and fourth exceptions, we now reach the rule affecting the doctor and the lawyer, in his relations with patient and client respectively.

We shall take up the rule affecting the relationship between client and attorney, first, because it was first in development under the law, on the one hand, and because it will not require detailed treatment on the other hand, since lawyers, at least, are presumed to know, or to be able to find when needed, the law so closely affecting their relationship to the profession.

The rule in this State, with its final amendments, is stated in the old Code of Civil Procedure, transplanted in the new Civil Practice Act, in the following language:—

"An attorney or counsellor at law shall not be allowed to disclose a communication, made by his client to him, or his advice given thereon, in the course of his professional employment, nor shall any clerk, stenographer or other person employed by such attorney or counsellor be allowed to disclose any such communication or advice given thereon."

The statutory enactment is largely declaratory of the common law. This rule dates back to an early period. I have traced it back more than three centuries and have found it then as an accepted rule, fully established, and steadily upheld. It apparently dates back to the time when the development of the law and the growth of its complexities under the requirements of an advancing civilization, gave birth to the full practice of law by men skilled in precedure and learned in jurisprudence. Its purpose was to protect the client in his disclosures and to remove the fear of free expression, which would otherwise restrict the administration of justice and the ascertainment and enforcement of legal rights.

Under the common law, a line of decisions have grown up which have inclined in the direction of holding that, as the spirit of intent of the rule was for the protection of the client, the rule should have no application where the interests of the client are served, or his will enforced, as in the conservation of a deceased client's estate or in the probate of his will. This exception seemed to grow in the progress of time, and rules began to develop that protection of confidential communications does not apply to confidences between attorney and client, after the death of the client, where the communications are calculated to sustain the will or to conserve the estate. For a time, the rule seemed about to take a grip in this State. In the case of King vs. Ashley, reported in 96 Appellate Division, decided in 1904, the Appellate Division in the Third Department, in the sweeping language of a dictum, seeks to fasten the principle upon this State. The language follows:—

"The spirit of the law must not be lost sight of in pursuing its letter. The rule grew up under the common law, and was subsequently incorporated into a statute to protect the client; not to harm him or his property interests. . . . Through whatever change of situation the rule has passed, its object has been to protect the client, and for his good. Neither the spirit nor the letter of the rule permits a different construction."

The opinion continues that communications to an attorney tending to conserve the estate of the client after his death are admissable. This is all dicta, not necessary for the decision of the case, hence not binding as a precedent. The case was affirmed in the Court of Appeals, without comment upon this dictum and this failure to comment upon this dictum came dangerously close to being treated as sanctioning the principle stated.

In the Matter of Cummon, reported in 201 N. Y., however, in 1911, the question was squarely presented to the Court of Appeals, and after a very learned discussion in which the common law rule is compared to our statute and its enactments, the Court of Appeals distinctly holds, that under our statute, except where specifically provided otherwise, every confidential communication made to an attorney by his client during professional employment, is covered by the protection and the court cannot inquire whether the disclosure would be treated as beneficial or detrimental to the client, particularly after his death.

The qualifications specifically provided by statute provide that an attorney who has witnessed the will of his client shall not be disqualified as a witness to establish its preparation and execution, and further that the protection of a confidence shall not apply where waived by the client on the trial.

Where the communication is made in the presence of a third person, or is subsequently disclosed by the client to a third person, it is no longer a confidence within the meaning of the law and is no longer entitled to the privilege.

The principle is demonstrated in the case of People vs. Farmer, reported in the New York reports. In that case the defendant, a woman, was charged with the brutal murder of the wife of a neighbor, a Mrs. Brennan, by crushing her skull with an axe. No one saw the act, but the body was found in a trunk in the house of the defendant. In order to show a motive for the crime, the prosecution sought to show that the defendant forged and acknowledged a deed of Mrs. Brennan's property to the defendant, and called the attorney who made and executed the deed for the defendant, posing as Mrs. Brennan. This was objected to as a confidential communication between attorney and client but, as it appeared that defendant had later admitted in the presence of others that she had executed the deed, the court held that the subsequent voluntary disclosure by the client stripped the communication of its character as a confidence between attorney and client only, and sustained the admission.

The principle was recently invoked in litigation between attorney and client involving a charge of malpractice against the attorney. In his defense the attorney took the witness stand and sought to disclose the instructions given by the client to show that the acts complained of were the products of the plaintiff's specific instructions. The disclosure of the instructions to the attorney by his client was objected to on the ground that they were confidential communications within the meaning of the rule, and were exempt from the disclosure. The testimony, though possessing every qualification under the law as confidential communications, was admitted on the theory that in bringing suit plaintiff waived the protection and opened the door for the admission of the intercourse between the parties involved in the issues. Similar reasoning would seem to be applicable where the client questions the services of his attorney by contesting the bill, yet the Court will, under objection, protect such communications.

The two important elements to be remembered, as the *sine qua non* of a communication between client and attorney entitled to the protection, are that it must be a confidence and it must be in the course of professional employment.

For our purposes, here this evening, this will close our discussion of the rule governing the protection of confidential communications between attorney and client, and we will take up the discussion of the rule governing confidential communications between physician and patient.

The law of this State protecting communications transmitted to the physician by his patient is found in Section 834 Code of Civil Procedure, and its corresponding section in the Civil Practice Act reads as follows:—

"A person duly authorized to practice physic or surgery, or a professional or registered nurse, shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity; unless where the patient is a child under the age of sixteen, the information so acquired indicates that the patient has been the victim or subject of a crime, in which case the physician or nurse may be required to testify fully in relation thereto upon any examination, trial or other proceeding in which the commission of such crime to a subject of inquiry."

This rule is strictly the creature of statute. It has no existence at common law. The reason for this is not difficult to discover. While medicine as a science dates back to early days, the general practice did not develop for a long time and the protection necessarily was delayed until after the importance of the relationship between physician and patient received due recognition. During the latter part of the nineteenth century, in response to the sentiment among the jurists for the need of a law protecting communications between patient and client, legislation followed in the substance of the foregoing statute.

The original law in this State has been amended from time to time to broaden its scope. In 1904 the amendment recognizing the nurse as the inseparable assistant of the physician and bringing the nurse within the scope of the rule was adopted. In 1905, the law was put into its present form by excepting from the protection information acquired in the treatment of a child under sixteen, where it appears that the patient has been the subject or victim of a crime and the information is sought in a proceeding or trial where such crime is the subject of inquiry. This exception was added as the outgrowth of questions arising in rape and abortion prosecutions.

In the application of the rule a distinction has been developed between communications from patient to physician and those from client to attorney. In the rule governing the protection given to communications between client and attorney, the word "confidence" has been interpolated in the reading of the law, and only such communications are protected that are confidential in their nature and may be characterized as confidences. The protection given to communications between patient and physicians has not been so confined, and any communication to a physician by his patient made in the course of professional treatment, and necessary for the treatment is covered by protection. The distinction has been carried even further. Any information received through independent investigation on the part of the attorney is not covered by the protection, while all information received by the physician, whether from the lips of the patient or the objects of observation, in the course of treatment and necessary for the treatment is covered by the protection.

A distinction has likewise been made between such matters as invoke professional knowledge or require the exercise of professional skill in interpreting and bringing them to light and understanding and those things which may be classed as ordinary objects or incidents plain to the observation of anyone. The rule holds that the protection does not apply to those facts and incidents requiring no peculiar special professional knowledge or skill to observe. To demonstrate the rule, for instance in the case of Papp vs. Insurance Co. in 133 N. Y., a doctor was permitted to testify that he attended the patient in a professional capacity, together with the dates when he attended the patient, the court saying that these are matters of observation requiring no professional knowledge or skill; that these are mere statements of ordinary facts and happenings, and as the questions did not involve the disclosure of anything acquired in the course of treatment, the answers were admissable. Though this case has never been overruled, and is the law of this State, it has been critized and the rule is confined strictly within the scope of the decision, so that a physician will be compelled to testify to attendance upon his patient, and the dates thereof, as long as the answers do not involve the disclosure of any information acquired in the course of treatment.

To bring the case within the protection three elements must be present: (1) The relation of physician and patient must exist; (2) The information must be acquired while attending the patient; (3)The information must be necessary to enable the physician to act in that capacity. And the burden of establishing these elements rests upon the person who seeks to exclude the evidence.

The serious difficulty in the application of the rule has presented itself in respect to the last element, namely, was the information necessary to enable the physician to act in that capacity? A very interesting case presenting the point is reported as Green vs. Met. Street Railway Co. in 171 N. Y. In this case, it appeared that plaintiff's leg was lost upon being run over by one of the cars of the defendant. He was treated by a Dr. Moorehead, then connected with the hospital where plaintiff was being treated. Later this doctor entered the employ of the railroad, and on the trial of the case for the recovery of damages for the personal injured suffered, the doctor was not permitted to give in evidence the patient's narration of how the accident happened. This ruling was taken to the Appellate Division and was affirmed by a court divided three to two, and was then carried to the Court of Appeals, where the judgment was reversed by a Court divided four to three.

The reasoning of the majority opinion is, that this narration was a voluntary statement, which was not necessary to enable the physician to act in a professional capacity. It is one of those singular cases, with the line of distinction so fine, that the courts were everywhere divided upon it, and although seven judges brought the case within the exceptions, namely, the trial court, three judges of the Appellate Division and three judges of the Court of Appeals, and only six judges took the opposite view, the final determination is still the law of this State.

Another interesting case on this point, is the case of Nelson vs. Oneida, in 146 N. Y. This was an action for personal injury sustained by a fall due to a defective sidewalk. The injuries claimed to have been sustained by plaintiff were an umbilical hernia,

a prolapsus of the uetrus and bruises. The defendant, in an endeavor to show that plaintiff had an umbilical hernia before the accident, called a former physician of the plaintiff, and endeavored to prove by him that in the course of treatment in the past, he had discovered that plaintiff was suffering from an umbilical hernia. This was objected to on the ground that the testimony involved the disclosure by the physician of information acquired from the client in the course of treatment. The argument urged in support of the testimony was that since she was not being treated for that condition it was not information necessary to enable the physician to act in that capacity. The court excluded the testimony and this was sustained in the Court of Appeals.

These cases are difficult to reconcile. I have cited them for the purpose of showing how zealously the Courts have guarded the important privileges granted to communciations of this character, with full realization of the fact that the protection is an extraordinary departure from the general laws directed to carry on the functions of government, calculated to protect the important relationships covered by the rule.

In summary, and to crystalize the principles so as to render them more easily retained in the memory permit me to repeat the principles in another form from the points developed in the discussion.

With the exceptions following, the law recognizes no confidences or communications privileged from disclosure in the ordinary administration of justice:

The exceptions are:—

(1.) Confidences between husband and wife during marriage.

(2) Confessions to a minister of religion in his professional chacter, in the course of discipline enjoined by tenets of his religion.

(3.) Confidences between client and attorney in the course of professional employment in a pending cause.

(4.) Communications between patient and his physician during professional employment, while attending the patient and necessary to enable the physician to act in that capacity.

Discussion

Dr. R. W. Wilcox: I am sure that the physicians present have been greatly edified by the presentation of this subject in the scholarly way in which we have heard it. There are amplifications, from what the speaker said, quite well known among the legal profession, but, with the great respect for the law which the physician has, are quite unknown among us. We have had our attention called to seeming contradictions in regard to the same series of facts going from the lower to the higher courts. Lawyers for many years have called the Court of Appeals the Court of the Last Gasp, and we have proof of this to-night. The problem underlying all the rules of evidence applied to confessions lies in the fact that nothing is created by law. Law is merely crystallized custom, and it became necessary in the marital relation, in the relation between lawyer and client, priest and confessor, and physician and patient, that there should be some method by which the interests of the second party in each case should be protected. That necessity was the cause of this rule of evidence which pertains to communications confidential or necessary. Probably the greater importance of confidence in the variation of fact to the law kept the word "confidence" in that relation. Probably also the material facts upon which opinions are based left the word "necessary" while leaving the word "confidence." You will observe in this masterly presentation of the subject that something besides professional confidence and judgment have become involved. The clerk and stenographer and the office force are brought into the scope of the professional relationship. In the matter of the physician, the nurse has been brought into the scope. Within the next few years probably others besides the physician himself will be brought within the scope, namely the apothecary and laboratory worker. If we are assuming the last three exceptions to the generality of the law are exceptions based on professional relationship, we are obliged to alter our definition of the word profession and include those that are, with the old definition, merely occupations; and if we go outside of professional relation, where are we going to stop?

In medicine, opinion must be based on facts. We see the medical profession taking advice from those who have not learned medicine, from Ph.D.'s who have contributed a wonderful amount of knowledge. We have found it necessary to call for opinions on the evidence collected by chemists. I venture to state that the distinguished reader of the paper has had in mind that in that notorious case he mentioned there was a question whether the ruling applied to professional knowledge was not a little bit stretched to apply to the individual who might not be a member of the medical profession, and probably that idea was in the mind of the referee. In the ultimate analysis with the burden of proof on the other side to force the admissibility of the testimony which physician, lawyer or priest may make, it is quite easy to nullify the effect of these four exceptions. It may be a subject of judicial error and cause for appeal that improper testimony gets into the record, but once having gotten in there is no way of mitigating the good or evil effects of that testimony. (Quotes facts of Blum case.) It is a question of definition, and if we are going to count on the exceptions in favor of professional relations, those relations must be more properly defined than they are now in the rule of evidence. I am sure we have all our knowledge classified, but so long as the statute is so loosely worded and the terms need stricter definition, the three exceptions are going to be evaded when the necessity of the situation demands they should be.

Dr. William Steinach: There was one point in the paper by Mr. Solomon that I would like to touch on, regarding the imposition by the Board of Health on physicians to report venereal and genito-urinary diseases. That is one matter of confidence between physician and patient that is thereby violated. In the *Journal* of the American Medical Association recently there was an account of a case carried to the Court of Appeals. A physician was called to a man ill in a boarding house and sent a specimen of his blood for examination, and the report came back four plus Wassermann. The man was ejected from the boarding house and brought suit against the physician on the ground that his ejection resulted from a violation of confidence. It was decided that the physician's act was in accordance with public policy and under these circumstances a physician was permitted such disclosure.

Dr. Eden V. Delphey: There are certain venereal diseases that if they were reported to the authorities the victims would not go to physicians for treatment, but to apothecaries and quacks, and the result would be that the diseases instead of being lessened would be very much increased. I have been informed that, having this in mind, the Board of Health has never thoroughly endeavored to enforce that rule. At first the rule was to demand the name and address in full; later it was simply initials.

Mr. Wm. R. A. Koel: I would like to express a few views. We recognize that the fundamental duty of the courts is to promote justice. That is their aim. Naturally in their administration they may sometimes deviate from justice or they may do injustice. That is on evidence recognized by the judges themselves or by lawyers. I once witnessed in one of our courts in the city an amusing instance. In the course of the trial, a lawyer objected to the admission of some evidence. "Oh no," said the judge, "I am going to admit this evidence, for I have been overruled by the Court of Appeals by not admitting enough evidence." The lawyer told him he would perhaps be overruled still more.

In the admission of evidence one of the aims in the trial of cases is to discover is it relevant, material, or necessary to the complete understanding of what is known as the issue. It seems to me there was a distinction in these two decisions by the Court of Appeals instanced by Mr. Solomon which makes their apparent contradiction reconcilable. Was the statement to the physician as to how the injury was received or the accident happened at all relevant or necessary for the physician to treat the case? It seems to me, no. But whether the patient had had some disease or not, or had suffered from such disease, it seems to me is always relevant and necessary, for a physician must know all the ailments a patient has had. Furthermore, in the practice of law it is necessary for a lawyer, in order properly to handle the case to know all the facts, not alone those that are all the client thinks are necessary for the information of the attorney. That is for the attorney to determine. I remember a rule laid down by a professor in a law school that it was necessary to get all the facts and evidence. Otherwise in court something may be brought out, to the confusion of the lawyer, that he never knew, which would put a different phase on the case. As to the relation between lawyer and client, whether this is rare or not, the courts have established that this relation is one of confidence, so that the test there as to whether a communication

were confidential or not would be stricter than in that between a physician and patient. It seems to me that in order that there should be the fullest freedom of expression between a lawyer and client so that the former may know all that the client may have to tell, there should be the fullest protection; and in order that the physician may know all that may bear upon a particular ailment his patient has, he also should be entitled to the fullest expression of confidence of the patient in order that he may intelligently and properly treat that case. Therefore, it seems to me, the courts in protecting those relations for that reason might go very far in prohibiting any testimony in violation of the rule.

Mr. Solomon: If I may be permitted, I will group Dr. Wilcox's learned reflections on the subject discussed, with those of the last speaker, into two groups. The positions taken are not necessarily inconsistent. As I gather it, Dr. Wilcox deprecates the looseness of the rule that permits those not entitled to the protection of the law to avail themselves of it because of the failure to properly define what constitutes a fully licensed physician, and the last speaker thinks it advisable to encourage full protection for all confidential communications.

Lest we come to confusion, let us bear in mind that the protection which the profession receives is extraordinary. The greatest considerations only of public policy have evolved these rules. It is a matter of serious moment to close the door to evidence, sometimes of the most cogent force, sometimes vital to the case and to the strongest interests of justice, sometimes permitting a criminal to go free, at other times causing the most damaging losses. It is a most serious consideration in the due administration of law and cannot be lightly accepted.

I do believe that steps ought to be taken to so define the relations protected as to identify and isolate definitely those that come within the scope of the protection. I agree with Mr. Koel that insofar as you have defined the relationship entitled to protection it should be protected fully and completely.

As to the different questions propounded by Dr. Steinach, there is no different rule. Where a confidence comes within the protection of the law, or a communication comes within such protection, any public record of that communication required by law is likewise inadmissible in evidence. If the mouth of the physician is closed to a communication then that public record, required to be kept under the law, is also closed to that disclosure.

(Concluded from page 315)

patient to the proper clinic for treatment. Maternity hospitals have been negligent in the routine consideration of syphilis, and tuberculosis clinics have given the subject very little recognition. Even when cases are found, but little effort is made to connect the positive cases with treatment clinics.

The family case worker comes into contact with the venereal disease clinic largely in connection with the matter of treatment. She feels that she should have access to the doctor to explain social history and family conditions and secure some information concerning the patient. This she cannot do, partly because of the inadequate record system of some clinics and partly because of the attitude of the doctors. With regard to the former, often only a blank form is used which provides for no entry of special venereal disease data. Even if this information is fully recorded, the charts are sometimes not filed accurately, so that they cannot be found to supply the information which the case worker needs. As for the latter, many doctors, as yet, do not understand the social worker's task and the vital relationship of the health factor to all the family problems with which she is faced. As a result, they do not give out the sort of information regarding the patient which is relevant. The social worker is not so much interested in routine facts like Wasserman reactions, dates of treatment, and kinds of treatment, as she is in the more fundamental aspects of prognosis, such as degree of infectiousness, probability of becoming infectious, need for treatment or subsequent examination, probability of cure and restoration to full or partial industrial capacity, or if ability to work has been impaired, what limitations must be placed upon future employment. It is only with these facts in mind, that a constructive plan can be made for the family. For example, if Mr. A. will eventually become an institutional case because of cerebro-spinal lues, it is obviously a useless expense for a charity organization to give financial assistance to him in his home on the assumption that he may return to work. Or if he is in an infectious condition and home conditions are bad, he should not be allowed to menace his wife and children. Many illustrations of the value of such definite knowledge to the family worker could be cited wherein she can supplement the work of the clinic physician and social worker. If social workers know the true facts regarding the patient's condition, they can do their part to assist the doctors in such ways as supplementing the family income so that the patient who should not work does not have to take a job to keep his family from starving; carrying on an educational campaign of hygiene in the home; persuading the patient to return regularly for treatment; finding suitable employment for the partially handicapped, etc.

There is a field for co-operation between the doctor in the clinic and the social case worker interested in the general welfare of an individual who happens to be a venereal disease patient. When both reach a better understanding of the scope of each other's work, there will be brought about a marked improvement in the handling of the venereal disease situation from the social and medical point of view.

(Concluded from page 314)

tion of the large bowel. The melanotic sarcoma is the most rapidly fatal of all the sarcomas of the rectal region.

A subject upon which much is yet to be written is endothelioma of the rectum. Some cases have been recorded but the study, thus far, for want of a sufficient number of cases, does not permit of a thorough investigation of the structure or of the clinical course of these neoplasms. This malignant growth is engendered through the occurrence of hemorrhoids springing from the dilated vessels of the pile.

218 South Fifteenth Street.

Maternal Death Rate in New York State.

The State Department of Health has just published a pamphlet showing the distribution of deaths in this State from maternal causes and stillbirths. This special report, prepared in connection with the new campaign for the protection of the lives of mothers and babies, includes charts showing the death rates from these causes in every county, city and incorporated village of the State, including also the rural part of every county. This study is based on a review of 1,242,374 births which occurred in a recent 5 year period, of which number 50,552 babies, or 4 per cent., were born dead. Of the mothers of these children, it was found that 6,821 died of causes connected with childbirth, representing a rate of 55 in proportion to every 10,000 births. It was found that in each year in New York State over 1,300 mothers die from maternal causes, of whom over 400 die from septicemia or blood poisoning. For New York City, the rate of deaths from all maternal causes was 47 per 10,000 and in the rest of the State, 66. The rural part of the State showed a rate of 59 and the up-State cities combined, 69. The rate in the incorporated villages was 71.

An interesting chart of this report shows that in each year from 1910 to 1921 the maternal death rate of New York City was considerably lower than that of the rest of the State. Likewise the death rate from puerperal septicemia or blood-poisoning was also lower each year in New York City. Nevertheless, the report points out that the death rate from maternal causes in New York State is high and much higher in recent years than in such a city as Birmingham, England, whose rate is much lower than that of New York City.

Paget's Disease of the Bones (Osteitis Deformans)

With Report of Seven Cases

HYMAN I. GOLDSTEIN, M.D.

ASSISTANT VISITING PHYSICIAN, PHILADELPHIA GENERAL HOSPITAL; ASSISTANT IN MEDICINE, GRADUATE SCHOOL OF MEDICINE, UNIVERSITY OF PENNSYLVANIA; ASSISTANT VISITING PHYSICIAN, AND CHIEF OF THE MEDICAL CLINIC, NORTHWESTERN GENERAL HOSPITAL, PHILADELPHIA.

Camden, N. J.

(Concluded from November)

CASE VI.

George H. L., Medical. J. 3824. Service of Drs. G. M. Piersol and David Riesman.

Admitted 8/4/20. Discharged 12/3/20. Result, unimproved.

Diagnosis—Paget's Disease, Auricular Fibrillation (?).

Color: White. Nativity: Philadelphia. Age, 70 years. Occupation: Wood worker.

Chief Complaint:—Weakness. (Deaf.) Patient has been stone deaf for past 15 years. Cannot hear anything. Has had poor eyesight for past two years. Has always had pretty good health until last few months has been very weak and hardly able to be around. In bed for past two weeks. People know nothing of importance of his family or past history.

10/29/20.—Much stronger past two months, only complaint is occasional headache and dizzy sensation. His sons are trying to find an Old Man's Home to place their father—so far unsuccessful. This worries the patient a great deal.

Diagnosis—Paget's Disease. Dr. Norris.

Physical Examination:—Patient is a poorly developed, emaciated white adult male about 70 years old.

Head and Neck:—Large head, triangle shape base upward. Enlargement appears in bones of skull. Prominent forehead, hard tortorous temporal arteries.

Ears:—Patient is stone deaf.

Nose:—Neg.

Eyes:—Pupils small, regular, react to light and accommodation. No disturbance ocular movements.

Mouth:—Most of teeth missing, few infected roots left. Tongue coated, protrudes in mid line.

Neck:—Bilateral carotid pulsation visible.

Chest:—Enphysematous in type, markedly emaciated, prominent bony structures. Rachitic Rosary appear in front. Chest cage prominently arched posteriorly.

Lungs:—Marked sinking of supra and infraclavicular spaces, making both clavicles very prominent. Expansion fair, thoracic in type. Resonance increased over entire chest. No rales heard. Breath sounds roughened over both apices.

Heart:—P.M.L. 6 L.I.S. in anterior axillary line. Systolic thrill palpable over same area. Cardiac dullness extends from ant. axillary on left to right sternal border. Hard to determine on account of thoracic cage. Systolic murmur at apex transmitted to axilla. Marked irregularity only part of contractions being transmitted to peripheral arteries. Visible pulsation in peripheral arteries.

Abdomen:—Marked pendulant distention of the superficial veins. Rigidity of recti muscles relaxed, giving abdomen two prominent protruding eminences in each of lower quadrants. "Pot Belly." Lower palpable about 1 inch below costal margin. Seems to be a rigidity in upper abdomen.

Extremities:—Prominent bones in legs. Bow legs. Some edema of feet. Clubbing of fingers. Extremely wide pelvis for a man.

Diagnosis—Chronic Myocarditis. Result of rickets or Paget's Disease?

Notes by Dr Riesman—Large dolichocephalic head measuring 24½ inches circumference and 26¼ inches occipito-mental. He is deaf, but apparently very intelligent. Good musician. Says he has always worn 7⅛ hat. No enlargement of supra-orbital ridges on jaw nor of tongue. No teeth above, three stumps below. No deformity of chest except some emphysema with increase in depth. There is an exostosis just above junction of 5th rib with sternum. Apex beat 6th interspace 1 inch outside midclavicular line. One in constant systolic murmur at apex not transmitted, marked arrhythmia apparently due to fremitus systolic. No accentuation 2nd sound. No fluid, no rales, no deformity of spine. Liver—6th rib costal margin. Spleen, not enlarged. Abdomen, negative. Temporals tortuous. Radials thickened and beaded. Unusual power hypertension of thumb. Markedly bow legged. Distance between knees 68 degrees. Tibia shows saber deformity. Pigmented elongated mole below right knee. Large ankles, no edema. For 30 years his work compelled him to stand.

Diagnosis—Paget's Disease, Myocarditis, Arteriosclerosis.

Final Note—Condition has been the same. Patient requested discharge to be sent to the Old Man's Home.

Diagnosis—Paget's Disease—Auricular Fibrillation?

X-Ray Plate No. 12665. Date 8/9/20.

Skull:—The density of the bone is somewhat decreased, but the thickness between the outer and inner plate is markedly increased—particularly in the occipital region.

Femur:—Left: The bone is markedly thickened and bowed; the density of the bone is decreased.

The right femur shows a similar condition, but not nearly so marked.

The left humerus has an irregular outline—much decreased in density, but somewhat increased in diameter.

The right humerus is similar, but not so marked. Apparently the left side is more involved. (Paget's Disease?)

LABORATORY RECORD.

Urine Analysis.

8/10/20.—Orange; None; Acid; 1018; — —.

8/24/20.—Amber; — Alk.; 1018; 0 0 Phosphatis.

8/31/20.—Amber; Gran.; Alk.; 1020—trace; Oc. Hyaline casts Phosp.

9/22/20.—White straw; None; Acid; 1018; —trace.

10/13/20.—Straw; — Acid; 1010 — — Sp.—epi., oc., rbc.

8/6/20.—Bl Pr.: Systolic, 150; Diastolic, 80.

8/5/20.—Wassermann, negative.

8/12/20.—Ordinary blood count: Red Cells, 4.420.000. Leukocytes, 5.300.

10/4/20.—5.080.000. Hemoglobin, 85. Leukocytes, 18.000. Polynuclear, 80. Lymphocytes, 18 transitional.

Diagnosis—Paget's Disease.

Examination of Nose, Ear and Throat:—Dr. A. J. Keenan.

10/12/20.—*Nose:*—High anterior deflection of septum to right.

Throat:—Granular pharyngitis with submerged tonsils.

Ear:—Otosclerosis with a mixed deafness on left.

Examination of Eye Grounds:—Dr. Reese.

10/7/20.—Patient has absolute central scotoma in right eye. Both discs are of good color, but the margins, slightly blurred. Retinal arteries are rather contracted, but there are no hemorrhages or constrictions or tortuosities.

10/19/20.—Apparently no central scotoma today.

CASE IX.

Henrietta Nichols; color, black; age, 59; born in Maryland; occupation, housework.

Chief filing diagnosis—*Osteoporosis*, Cerebral Meningitis. (Paget's Disease.)

Complications—Brain Compression; Hypostatic Pneumonia.

Admitted 3/27/16. Died 11/15/16.

Attending Physician—Dr. C. W. Burr.

Interne—Dr. Wagnetz.

Feeling weakness and enlargement of the head.

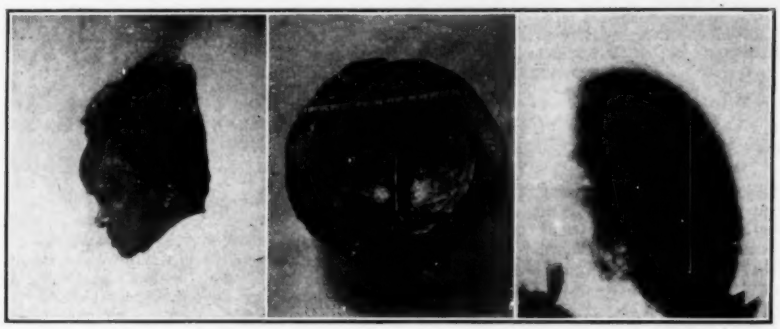
Patient is confused and does not answer the same question the same way twice.

About six months ago her head began to get large. She would have a feeling of pressure and headache. This was worse during the night. She noticed that her knees began to swell at about the same time. This was not painful. She is troubled with attacks of vertigo and sometimes everything gets black before her eyes and she has to grasp something to keep from falling. She had an injury five years ago. She has lost a great deal of weight in the past six months and she first noticed hemoptysis five months ago. Her appetite is good. She is confused. She speaks of people who are not present and will answer "Yes" to almost any question asked her. She is very positive that her head began to enlarge only six months ago. She began to cough five months ago.

Past History:—She had measles, mumps and chicken-pox when a girl. She had malaria at twelve years. She denies ever having had a venereal or any other disease. She began to menstruate at thirteen years of age. She is the mother of eight children and she has had seven miscarriages. One son, who is twenty-one years of age, has a head similar to hers. This began about four years ago.

Family History:—Father and mother dead, cause unknown. One brother living. Two dead. One sister living. Three dead. No other member of family had a similar deformity.

Physical Examination:—Patient is an adult female, poorly nourished and poorly developed. Deformity resembling rickets. She lies in bed quietly, does not seem to be in pain and her facial expression is that of one mentally deficient.



Head:—There is a very marked enlargement in both the anterior part and diameter and transverse diameter. There is a distinct lump over each ear in the mid temporal region.

Eyes:—Pupils dilated and react to light and accommodation.

Nose:—Saddle shaped depression.

There is a spasmodic pulling of the mouth to right and closing of the right eye at the same time, this comes when first attempting to speak.

Teeth:—Pyorrhea Alveolaris.

Throat negative.

Pulse:—Arteriosclerotic pulse of high tension and rapid, hard to ———

Tongue:—Pointed, tremulous, and pulls slightly to the right.

Neck:—Very short, but head freely movable.

Chest:—Expansion poor. Development poor. Apex beat not visible.

Palpation:—Tactile fremitus increased over right upper lobe anteriorly and posteriorly. There is a distinct thrill felt over cardiac area. Apex beat not displaced.

Percussion:—There is dullness on percussion over right upper love interiorly. Whole area is dull, posteriorly on right side. Cardiac area not markedly increased. Splenic and liver dullness not increased.

Auscultation:—Bronchial breathing heard over right apex and upper lobe anteriorly and posteriorly. Increased spoken voice and whisper pectorsloquy, dry and moist rales heard over lower lobe posteriorly on right side.

Heart:—There is a distinct thrill felt. A presystolic murmur and an accentuation of pulmonic and aortic second sounds.

Abdomen:—Negative.

Extremities:—Knee joints are enlarged, but not swollen or painful. There is a marked bowing outward of both femurs and bowing of both tibias. There is an ulcer on left leg near middle ⅓.

Reflexes patellar present, others negative.

(Signed J. W. P.)

7/23/16.—Patient is unchanged and is doing good.

9/22/16.—This woman is up in the way around the wards. She never gets any treatment and is able to get obout nicely.

(Signed W. H. HOUSE.)

9/22/16.—Transferred to Out-wards.

11/6/16.—Transferred to Nervous.

Notes by Dr. Leavitt:

11/9/16.—Patient is very deaf or very obstinate. Obeys some gesticulatory commands. Talks constantly to herself. In bed. Has very large bony deformity of head, most noted occipital and parietal aspects. No brittle soft bones. Very "bow-legged." Can walk by holding on to bed. Very tottering. Both legs seem spastic. Will not move right leg on command. Knee jerks slight both sides. No clonus. No Babinski. Moves left leg well. Moves both arms well, but will not feed herself. Apparently no sensory changes in arms or legs.

Tongue coated. Speech normal.

Eyes:—Pupils equal, react to light and accommodation.

11/15/16.—On this day patient went to bed. Up to that time was in an invalid's chair. All this time she was deaf and blind. On November 14th, going to bed she became stuporous and remained in this condition up till her death. Her respirations were shallow and rapid. Pulse was very rapid and irregular and of high tension. Her temperature began to rise to 102° F.

Patient was visited on this evening at 11 o'clock.

(Signed WAGNETS.)

11/15/16.—Still in this condition. Temperature 103. Pulse becoming weaker and weaker. Her eyes closed and a convulsive movement was noticed this morning of her right arm. Pupils were dilated. Left more than the right. They failed to react to light. Respirations were shallow and rapid.

11/15/16.—Patient died 11:20 A. M.

Social Service History.

F. H.:—Father and mother both dead, cause unknown. One brother living, age 59 years, paralyzed.

P. H.:—Very little known of early life, always well and strong. Married and always kept house. One son, 35 years of age, living and well.

P. I.:—Five years ago patient fell on the slippery streets, striking head, since then she has not been clear mentally, frequently wandered about the house and on the street without proper clothing. She plays with fire, that is fire seems to have a fascination for her, and the family must watch her constantly for fear she will set fire to her clothing. Patient imagines that she has visited strange places and seen certain persons.

Her conversation is rambling.

Patient makes her home with a son. This man states that he cannot attend to his work on account of the mother as she requires constant watching.

X-Ray Reports.

Plate No. 5840. X-ray of skull revealed:—Paget's disease—osteitis deformans.

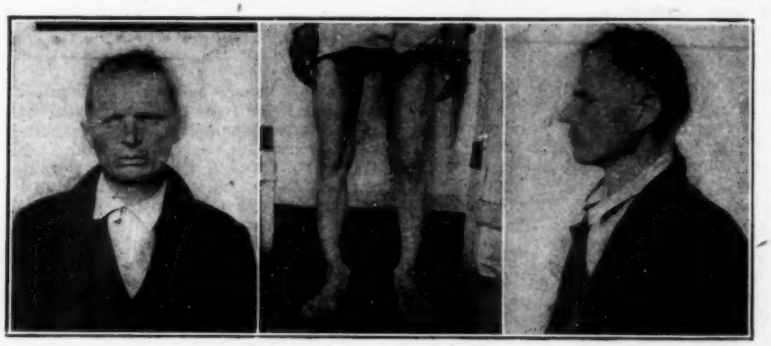
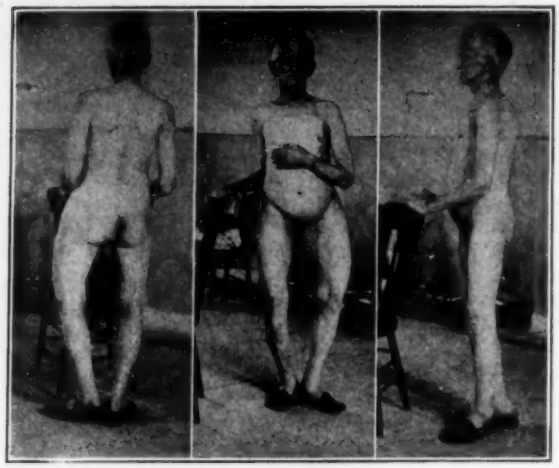


Plate No. 5926. Skiagraph of both femurs and tibias, including knee joints, revealed:—Paget's disease.

Autopsy No. 4153. Volume XXXI. Page 63.

Pathological Diagnosis.

Osteitis deformans: acute sero-fibrinous meningitis; chronic fibroid myocarditis; congestion of lungs; diffuse suppurative nephritis; red atrophy and necrosis of liver; cholelithiasis; atheromatous aortitis.



The body is that of a fairly well developed and well nourished colored female woman, rigor mortis absent. Pupils equal, semi-dilated, conjunctiva has distinct yellowish tinge. Head is enormously enlarged. Enlargement restricted to cranium. Face presents rather normal features. Circumference of cranium 27 inches taken at a level of 1½ inches above upper margin of orbit. Bossing of skull most prominent in each temporal and parietal region, forming a distinct tumor-like formation above the ears, otherwise rather regular in outline. Skull cap enormously increased in thickness, 3 c.m. in median frontal region, 3½ c.m. in median occipital region, 2½ lateral angles of removed calvarium. Cranial fossa rather prominent due to thickening of petrous portion of temporal bones. Floors of fossae are rather smooth and regular, the normal bony regularities being somewhat rounded. Maxilla slightly more prominent than normal, otherwise facial bones show no abnormalities. Clavicle, sternum and ribs show no gross evidence of thickening or deformity. Bones of upper extremities, including hands, show no gross deformity in thickening. Illia show definite thickening at crest. Femurs show external and anterior bowing. Some enlargement over inner portion of both knee joints. Bones in both legs show anterior and external bowing. Feet appear normal. Subcutaneous fat moderate in anterior, musculature red and firm, no edema.

Peritoneum:—Slim, moist, glistening, contains few c.c. clear straw colored fluid. Omentum appears normal, stomach and intestines slightly dilated, numerous hernial protrusions along mesenteric border of jejunum and to large extent of large bowel. Appendix 6 c.m., long, free and anterior normal. Lower end of liver 4 c.c. below costal margin in R.M.C.I. 5 c.m. below tip of ensiform mid line. Diaphragm 4 ribs in right 4 interspace in left. Both pleuro full, contain few c.c. clear straw colored fluid. Pericardium free contains 20 c.c. clear straw colored fluid.

Heart:—15 x 11 x 7 c.m., large, fairly firm, supercordial fat normal. Cavities enlarged, filled with liquid blood, heart muscle pale red, finer than normal wall. L.V. 1½ c.m. thick, papillary muscle short. Slightly fibroid at tip. Corda tendenium appear normal. Mitral valve leaflet shows distinct fibrosis and thickening at bases. Aortics thin and elastic. Coronary arteries moderately sclerotic. Foramen ovale closed.

Left Lung:—21 x 11 x 6 c.m. small, lacks crepitation emphysematous throughout both portions, slightly congested along posterior borders. No area of consolidation or cavity formation. Bronchi slightly reddened mucosa, peri-bronchial lymph nodes enlarged. Dark black in color.

Right Lung:—20 x 14 x 6 c.m. Like left lung in emphysematous anterior, slightly congested posteriorly. General features identical with opposite lung.

Spleen:—10½ x 7 x 3½ c.m. normal size, fairly firm, dark brown in color, cuts with normal resistance, exposing dark brown pulp.

Adrenals:—Show no gross lesions.

Left Kidney:—13 x 6½ x 4½ c.m. Large. Has large area at lower, pale 4½ c.m. in diameter, which is dark red in color studded throughout with numerous miliary yellow areas. Similar yellowish areas are found throughout entire kidney immediately beneath capsule 2 inches in diameter, softened but not liquefied cortex, slightly swollen, has reddish striations. Fat in renal pelvis normal in amount. Capsule is thin, strips easily, on covering smooth kidney surface.

Right Kidney:—11 x 6 x 3½ c.m. Has numerous yellowish areas under capsule similar to those described opposite organ, but not so many in number, but otherwise resembles other organ.

Ureters:—Are patulous, bladder contains 100 c.c. turbid amber colored fluid. Shows no gross lesions.

Uterus, Fallopian Tubes and Ovaries:—Show no gross lesions.

Stomach, Intestines and Pancreas:—Show no gross lesions.

Liver:—25 x 21 x 10 c.m. Soft dark red in color, surface and borders regular, cuts with decreased resistance, cut surface oozes blood freely, is of regular reddish and yellowish mottled color.

Gall Bladder:—Contains four large faceted calculi, few c.c. dark viscid fluid. Bile ducts are patulous.

Aorta:—Shows moderate atheroma.

Brain:—20 x 15 x 8 c.m. normal size, unusually soft, has a yellowish fibrinous exudate over cerebellum and base of brain, also to slight extent over hemisphere along central fissure. Spinal fluid slightly turbid. Ventricles appear normal.

Pituitary body and thyroid show no gross lesions. Bodies of vertebrae, laminae and spinal processes appear thickened.

Spinal cord shows no gross lesions.

REFERENCES

1. de Massary and Lechelle: Bull. Amer. Soc. Med. d. hop. de Par. 44: 134, Jan. 30, 1920. Ab. 74; 1286, May 1, 1920. Jour. A. M. A.
2. H. French Brit. J. Surg. 7:425, Jan. 1920.
3. L. H. Hempelman; Med. Clinics. N.A. 4;829; Nov. 1920.
4. A. W. Ferris; Med. Rec. 95;853; May 24, 1919.
5. F. Romer; Lancet 1:77, Jan. 8, 1921.
6. D. C. Hare and C. C. Bernard, Lancet 1;371. Feb. 9, 1921.
7. D. C. DaCosta; Surg. Clinics of N.A. 1:47, Feb. 1921.
8. P. Vallery—Radot, H. Stevenin and E. Fatou, Bull. et mem. Soc. med. d. hop. de Paris, 45;339 March 11, 1921.
9. Carman and Carrick; Roentgenologic aspects of Pagent's disease, J. Radiolog. 2;7, April 1921.
10. E. A. Locke; Med. Clinics of N.A. 1;947, Jan. 1918.
11. E. H. Funk, Med. Clinics of N.A.; 1;451; Sep. 1917. Report of a case.
12. A. H. Deppe, Interstate M.J. 24;772, Aug. 1917.
13. L. Heazlitt, N.Y. State J.M. 17;330, July 1917, Report of a case with sarcoma.
14. G. Pernet, Paget's disease with morpheo sclerodermia of skins. Brit. J. Dermat. 29;110, April and June, 1917.
15. Cutler; Boston M.S. and J. 174;187, Feb. 10, 1916.
16. Connolly; M.J. Australia; 1;283, April 1, 1916. A case of Paget's disease.
17. Buchi; Osteitis Deformans; Schweiz. Med. Wchnschr. Basel, 1921, 1066-1069.
18. Coan (Roentgenolog. sturdy) Fortschr. a.d. Geb.d. Rontgenstrahlen, Hamb. 1921, xxviii. 242;247.
19. C. W. Perkins; Am J Roentgenology, 6;151, March 1919.
20. P. Marie and A. Lei; Bull. et mem. Soc. med. d. hop. de Paris 43;901 Oct. 1919. Abs. 74;83 Jan. 3, 1920; The skull in Paget's disease.
21. P. Marie and A. Leri, Bull et mem. soc. med. d. Hop. de Paris 43;904 Oct. 31, 1919. syringomyelia with Paget's disease.
22. R.Abbe; Repair after surgical operations; J.A.M.A. 70;371, Feb. 9, 1918.
23. B. Stivelman and E. L. Ray, Pagent's disease of bones. N. Y. Medical J. 108;678, Oct. 19, 1918.
24. Pagent; Medico—Chir. Trans. 1877, LX, 37.
25. Publications Jefferson Medical College and Hospital, 1915, vi, 1-44.
26. K. Stettner: Osteitis Deformans or Enchrondroma? Beitr. z. klin. Chir. 124;414-422, 1921, Tübing.
27. Babonneix, Denoyelle and Perisson: Paget's Disease; Bull. et mem. Soc. med. d. hop. de Paris. 45: 1579-1582, Dec. 2, 1921. Abs. J.A.M.A. 78; 467, Feb. 11, 1922.
28. Galliard: Paget's Disease of Bones, Bull. et mem. Soc. med. d. hop. de Paris. 45; 1583, Dec. 2, 1921; Abs. J.A.M.A. 78; 467, Feb. 11, 1922.
29. P. Lewin: 3 Cases. J. Bone and Joint Surg. 4; 45-67, Jan. 1922. (251 cases collected).
30. Paget: Lancet November 18, 1876, p. 714.
31. Paget: Medico-Chirug. Trans. 1882, LXV. p. 225.
32. Czerny: Wien. Med. Wochnschr. 1873, XXIII, p. 894.
33. Wilks: Lancet, 909, II, 1877.
34. Hurwitz: Amer. Jour. Med. Scs. CXLVII, 1914, p. 855.
35. Packard, Steele, and Kirkbride: Am. J. M. Scs. Nov. 1901, II, p. 552. CXXII. 550.
36. Frangenheim: Ergeb. der Chirurg. und Orthopäd., Payr.-Küttner, Berlin, 1921, p. 1.
37. Fussel: Trans. Assn. Am. Phys. XVII, 1902, p. 403.
38. Claude and Oury: Bull. de la Soc. Med. des Hopitaux, Paris, Feb. 10, 1922, 46, No. 5, page 283.
39. Guillian: Idem. page 291.
40. Locke: Oxford Medicine.

Apert and Bigot (December 23, 1921, Bull. et mem. Soc. Med. d. hop. de Paris, pages 1715-1717) reported on hypertrophic osteo-arthropathy.

Biehler (Jan. 1922, Arch. de Med. d. Enf. pages 36-40) reported on congenital rachitis plus osteomalacia, while Calot and Collen (Presse Med. Jan. 14, 1922) and Lance, Andrieu, and Coppelle (J. de Chir., Nov. 1921) recently wrote on deforming osteo-chondritis, as did also Platt (Brit. J. Surg., Jan. 1922).

Perthes, Francisco, Brandes, Grob and others.

Hoffman (May, 1920), Butler (July, 1920), Bryan (June, 1920) and others reported on hypertrophic osto-arthropathy.

Büchi (1921) and Caan (1921) wrote on Osteitis Deformans.

Delahaye (1921), wrote on Osteite fibreuse kystique localisee des os longs (Gas. d. hop., Paris, XCIV, 1125-1139), Flörcken, Mouchet, Painter, and others. Also, recently reported on Osteitis fibrosa.

OSTEITIS FIBROSA

1. Lake and Schuster: Case Report. Lancet 1:546, March 6, 1920.
2. Boodgood: Southern Med. J. 13: 885, Dec. 1920.
3. V. Benst: Deutsche Ztschr.f. Chir. 152; 60, 1920.
4. Greig: Edinburg M. J. 24; 324, May, 1920.
5. Frangeheim: Congenital Osteitis Fibrosa—Arch. f. klin. Chir. 117; 22-39, 1921.

6. Delahaye: Osteitis Fibrosa Cystica. Gas. d. hop., Paris, 1921, XCIV, 1125-1129.
7. Mouchet: Osteitis Fibrosa Cystica. Bull. et mem. Soc. de Chir. de Paris, 1921, XLVII, 970.
8. Painter: Osteitis Fibrosa, Bost. M. & S. J., 1921, CLXXXV, 677-683.
9. Flörcken: Von Recklinghausen's Disease, (Generalized osteitis fibrosa cystica): Med. Klin. Berlin, 1921, XVII, 1171.

1425 Broadway.

*In addition to the cases cited, I know of a case of Paget's disease in a practicing physician of Philadelphia (Dr. W.), concerning whom Dr. J. W. McConnell has all the clinical notes. Dr. A. E. Colcher, of Philadelphia, has notes of three cases of osteitis deformans studied roentgengraphically by him. Dr. Hobart A. Hare, of Jefferson Medical College, recently had one or two cases at the Jefferson Hospital.

The Physician's Library

Brain Abscess.—By Wells P. Eagleton, M.D., Medical Director of the Newark Eye & Ear Infirmary, etc., cloth, 297 pages. New York: Macmillan Company, 1922.

The distinguished author of this book has frankly stated his object is to make the reader think in terms of pathology and to have such ideas in mind in planning operative intervention.

The book is divided into three parts: general considerations, intracranial surgery, surgical pathology and operative technic and surgical diagnosis. The first part is devoted entirely to intradural technic. Part two includes pathology of brain abscess and surgical classification, metastatic, cerebellar and frontal lobe abscess; while the third part is given over to diagnosis of brain abscess.

While this splendid work is a record of the author's wide experience, he has not hesitated to cover the literature with more than seven hundred references, to compile and analyze one hundred and twenty-five post-mortems, one hundred and forty-one cases of frontal lobe abscess, together with a great amount of material which is of particular interest to the surgeon who is doing this type of work.

Col. Eagleton has rendered a distinct service to the profession in the production of a book which will stand as a monument to his skill as an operator and to his industry as an observer.

Physical Diagnosis.—By W. H. Rose, M.D., University of Arkansas; 755 pages, 319 illustrations. St. Louis: C. V. Mosby Co., 1922.

The third edition of this book has been prepared very carefully and considerable of the material has been rewritten, bringing it up to date. One of the particular features of Dr. Rose's work has been his handling of anatomy and pathology from a clinical standpoint.

A valued addition to this edition is a chapter of electrocardiography with the diagnosis of the cardiac arrhythmias written by Dr. Drew Luten, of Washington University.

The book is an interesting and very practical one.

Symptoms of Visceral Disease.—By Francis M. Pottenger, M.D., of Monrovia, Cal.; 357 pages. St. Louis: C. V. Mosby Co., 1922.

Dr. Pottenger has produced a second edition of a book which was reviewed favorably in these pages in 1919. He has made many changes from the original, thereby increasing the value of the contents.

The object of the book is to interpret in terms of visceral neurology symptoms which are found in the clinical observation of visceral disease and his object has been attained.

This monograph is one which every physician should have in his library.

Lateral Curvature of the Spine and Round Shoulders.—By Robert W. Lovetat, M.D., Harvard Medical School; 217 pages. Philadelphia: P. Blakiston's Son & Co., 1922.

Dr. Lovett is one of the outstanding figures in American orthopedics and the fourth edition of his little book is brought out for the purpose of emphasizing those methods of treatment which have stood up under usage. The work is a standard and its teachings can be followed with authoritativeness.

The Physician Himself. By D. W. Cattrell, M.D. 359 pages. Published by the author at the Emerson Hotel, Baltimore, in 1922.

This book has been reviewed before in these pages. It contains many practical truths based on a life long experience in the practise of medicine. Physicians can do well to read the book and ponder upon its wisdom.

(Concluded from page 309)

contact is established, after which the capillaries and small vessels will pass into them.

The divergence of opinion among different surgeons upon the survival of grafts is often due to the difference in the procedure followed in their graftings. Certain of them record excellent results because the soil chosen has proved favorable to the transplantation certain others announce a check because the grafts were placed in unfavorable places, the survival of the graft is for a more or less lengthy period linked up with choice of soil.

Placed under the skin, or under the muscles, the grafts even under the most favorable conditions, only partially survive. The centre is always mortified, the cortical portion ordinarily survives but is reabsorbed at the end of some months.

Placed in a closed vessel or, at least, in the neighborhood of a vascular tunic, where the exudation is made rapidly, the graft survives, and a large portion escapes the blight of mortification, and can last for several years.

We have not yet reaped a sufficient harvest in our experiment to be able to judge exactly how long the vitality of a graft may be preserved under the best grafting conditions, but we have sufficiently indicated the conditions which can assure a very long survival.

Operative Technique

As to the method of procedure in grafting testicles, I have described those which gave the best results in the case of the operation on the third human subject.

The graft of the entire testicle can be made, but on condition that it be of small volume, and young. These young testicles have a thin albuginea, which facilitates the imbition of the graft by the plasma exuded. It is good moreover, to practise slight scarifications upon the albuginea with the scalpel, to leave some passages open for the plasma, and thus facilitate at the same time, the formation of points of contact.

But for the most part, it is the fragmentary graft which is preferable. Here I must draw attention to a pitfall we must avoid. For a long time one has preached the graft en "semis" the graft of quite small fragments. This practice I do not advise, seeing that too small grafts placed in the midst of well irrigated tissue are so rapidly absorbed by these tissues, that nothing remains.

According to the size of the testicle, divide it into two or four into six or eight fragments, scarify their albuginea lightly, and attach them by a stitch in catgut, above and below, directly to the testicle, or to the vaginal.

I place the fragments in such a way that the glandular face be in contact with the vaginal. One important point to observe is that the fragments must be spaced around the testicle of the patient in such a manner that they do not touch each other, but are everywhere in direct contact with the tissues of their new home.

New Clinics for Speech Defects.

At Simmons College in Boston, last Summer, several new speech clinics were started. These clinics drew over 200 cases in one month. There is so little and such poor work of this nature done around Boston, that this clinic will now be continued through the year on Saturdays. There will be four clinics—one for pre-kindergarten cases, one for child phonetic defects, one for stuttering, and one for the feeble-minded. One hour will be consigned to each, and a special teacher will take charge. The whole series of clinics will be under the direction of Dr. Walter B. Swift, Director of the School for Speech Education, Bay State Road, Boston. Patients will be admitted only after writing and describing their case. The clinic will be free to charity patients.

The Medical Times

A MONTHLY JOURNAL
OF
Medicine, Surgery and the Collateral Science
ESTABLISHED IN 1872

EDITED BY
H. SHERIDAN BAKETEL, A.M., M.D., F.A.C.P.
ARTHUR C. JACOBSON, M.D.
Associate Editor.

Contributions.—EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this publication.

When authors furnish drawings or photographs, the publishers will have half tones and line cuts made without expense to the writers.

SUBSCRIPTION RATES
(STRICTLY IN ADVANCE)

UNITED STATE . . . . . $2.00 per year
(Including Alaska, Cuba, Mexico, Porto Rico, Hawaiian and Philippine Islands)

CANADA . . . . . $2.25 per year
FOREIGN COUNTRIES IN POSTAL UNION . . . . $2.50 per year

SINGLE COPIES, 20 CENTS

Definite written orders for THE MEDICAL TIMES are required from all subscribers, to whom the journal is thereafter regularly forwarded.

Notify publisher promptly of change of address or if paper is not received regularly.

Remittances for subscriptions will not be acknowledged, but dating on the wrapper will be changed on the first issue possible after receipt of same.

All communications should be addressed to and all checks made payable to the publishers.

MEDICAL TIMES CO.
ROMAINE PIERSON, *President*
H. SHERIDAN BAKETEL, *Treasurer*
GEORGE B. CREVELING, *Secretary*
95 Nassau Street - - - New York

NEW YORK, DECEMBER, 1922

Brooklyn the Medical Center

If the plans now on foot in Brooklyn are carried out there will shortly be established there the foremost graduate school of medicine in the world.

The plan is nothing less than to found a school of medicine which will give the broadest hospital teaching to every practising physician in the community.

The teaching force of the Long Island College Hospital, the best talent of the County Medical Society, and the staffs of the score of public and private hospitals will join together in putting the plan into practice.

It is a co-operative project of great magnitude and promise.

The fact that there is only one medical school in Brooklyn makes the project peculiarly feasible, for obvious reasons.

It was Kings County which showed the State and the country how to fight health insurance and kindred legislative menaces effectively. Now it leads again in medical extension education.

The plan appears to have had its inception in the huge success of the Friday afternoon practical talks which were begun only a few months ago. They were held at 5 P. M. and dealt with subjects with which the practitioner was actually struggling in his every day work. The response in interest was tremendous, and if one came late he simply did not get in. No movie ever had a keener audience. It seemed to be a case like that of the scriptural hart panting after the water broks.

Surely no body of medical men in the world has ever shown a finer realization of professional obligation than those responsible for this project.

Nobility imposes obligations.

A Serious Handicap

Since it is a well known fact that a single typhoid carrier, particularly if a foodhandler, is capable of starting epidemics menacing thousands of persons, it is obvious that the presence of seven such carriers in New York City, discovered by the Department of Health since 1915, is a notable achievement in preventive medicine.

These seven carriers were engaged in the manufacture of candy and infant food, in the handling of milk, and in the preparation of salads in a hotel.

This discovery, however, only emphasizes the latent danger that resides in the fact that less than ten per cent of the 750,000 foodhandlers who live and work in the city are examined in the course of a year. Only 25 per cent of this work is done by Department physicians, most of it being in the hands of private practitioners. The Department force is too small to cope effectually with the situation.

In such circumstances, it is obvious that scores of individuals working as waitresses, cooks, milk handlers and confectioners must threaten the health of their fellow citizens in a manner easily open to correction.

This situation is a good illustration of the way in which modern preventive medicine is unable fully to apply its knowledge.

It is certainly an eye-opener to learn that the great city of New York is so dangerously exposed. We hope that the able Health Commissioner of New York will find it possible to secure sufficient funds to wipe out a menace whose existence is the gravest kind of a reproach to our citizenry. The Department is fully alive to the disgrace implied and is doing its full duty within shameful economic limits. Responsibility for an epidemic, should one occur, could not be laid at its doors.

The New Version

The sharp discussion anent the Potter version has resulted in great practical good, in that the technic of version has never been so well understood and practised, both by general practitioners and specialists, as at the present time. As to the indications, there appear to be but few willing to follow the intrepid Potter, and this reluctance is well founded, since conservative men show better statistics as regards child mortality. But the startling frequency with which Potter resorts to version and his sensational papers have compelled a close study of this high development of a historic procedure. The profession owes much to his work with respect to technic, however much it may differ from him as regards indications.

Another Milestone

A Brooklyn hospital has sent out cards to the profession announcing certain interesting intentions. Practitioners are to be notified when their patients enter a hospital, when they are to be operated upon, and when they are discharged; they will also be invited to see their patients when the visiting physicians or surgeons make their rounds.

This innovation is much better than special privilege or occasional courtesy.

It is true that only one hospital has extended the invitation formally, but the ice has been broken and we are confident that a new era has been ushered in.

The "Free State" for the profession seems just around the corner. The fight for democratic decency nears its close.

Soft-Boiled Titans

Why do our present-day captains of industry so frequently find it necessary to retire to some sanitarium to recuperate after business or other strains which ought to be no great tests of virility? The latest instance is Mr. John D. Rockefeller, Jr., whose automobile was recently struck in the rear by another car. Mr. Rockefeller was not injured in any way, and yet he made an almost immediate bee-line for the Battle Creek institution; in fact, it was given out at the sanitarium that he was in good physical trim.

There is apparently something the matter with the moral and mental fiber of our industrial leaders to-day. The hard-boiled old fellows of an earlier generation who are still in the ring seem to be made of different stuff. It is our conviction that the elder Rockefeller and his early contemporaries were not so easily jarred by the frictions and strains of life. They had "guts". Russell Sage never took a vacation, let alone a sojourn in a sanitarium. If such men represented one extreme, the present generation represents another.

After putting through a deal your contemporary captain is all in and has to rush off to some retreat for rest, dieting and various forms of therapy.

If there are to be no more titans the industrial machine may totter further. Perhaps the chaos in the business world to-day is due as much to neurasthenic leaders as it is to the shortcomings of the workers.

Non-Medical Practitioners

The New York Department of Health furnishes the following list of non-medical agencies essaying to heal the people of the city and state:

1. Osteopathy
2. Chiropractic
3. Massage
4. Christian Science
5. Hydrotherapy
6. Mechanotherapy
7. Neurotherapy
8. Calorotherapy
9. Naturotherapy
10. Suggestotherapy
11. Hypnotism
12. Spiritism
13. X-Ray Treatment
14. Physicists' Treatment
15. Liver Pad Treatment
16. Food Specialists
17. Indian Remedies
18. Electrical Belt Treatment
19. Rejuvenators
20. Dermatological Institute
21. Serum Laboratories
22. Men's Specialists
23. Anatomical Museums
24. Fountain of Youth
25. Society of Universal Science

When one considers that there are about 2,500 chiropractors alone in New York State and 1,500 in New York City, one may well be appalled at the probable total number of charlatans practising under the foregoing cults and allied groups.

If, roughly speaking, there are 16,000 physicians in New York State, of whom about 9,000 are in New York City, it seems fair to assume that there are at least an equal number of non-medical practitioners in competition with the physicians. It will not be long before the regular practitioners will be in a minority, unless licenses shall be issued to their competitors only after examinations equivalent to those required of medical graduates. Such a system would reduce the number of irregular practitioners and greatly minimize present evils. We can never, of course, wholly eliminate certain types of well qualified but shady practitioners.

Nothing has happened to alter our confidence in the plan outlined in this journal four years ago whereby the victims of quackery might be more directly relieved. It is the business methods of the quacks that lay them open to easy attack, instead of which we go after them on the basis of fake diagnosis and mystical therapy. The irregular practitioner gets his fee in advance because there is an implied or direct guarantee of cure. It is the guaranteeing of a cure and the receipt of money for the offer against which we should direct our efforts. This constitutes the obtaining of a fee under false pretenses and should be declared unlawful.

Irregular practitioners do not prosper because their therapeutic methods are successful, but because of the advantage that they take of sick people. It is within our power to put an end to the taking of such advantage.

It is now unethical to guarantee a cure; it should be made unlawful as well when sealed with a fee in advance. The taking of money in advance of treatment should constitute *prima facie* evidence of fraudulent intent. Restitution of the fee should be the penalty, which provision would make quackery unprofitable and compel its practitioners to go to work.

Under such a simple law the quack could not collect his fees in advance, and he would seldom get them after the completion of treatment, for obvious reasons.

Make quackery unprofitable and you will have destroyed it. Our more complicated and roundabout present methods have failed.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

The Doom of the Dumbbell

Dr. Walter Graves, writing in the MEDICAL TIMES of November, 1922, made the following remarks:

> The question has often been asked: "What are we going to do?" A few months ago the Old-timer was in the office of a confrère who divided the reception room with an osteopath. The doctor was out, but the osteopath was friendly, and the conversation developed the fact that he confined his practice to cases that might be benefited by the methods of treatment in which he had been trained, referring the others to the physician, who in turn referred cases to him which were amenable to his line of treatment. If all physicians, and all devotees of the cults were as open-minded as were these two, the above question might easily be answered.

The foregoing remarks are interesting in that they reveal that some men are *formally* exchanging patients in the manner described. The same sort of thing goes on informally all the time. Some of the patients of every regular practitioner reach the osteopath, and some of the osteopath's reach the regular practitioner. The same thing is true as regards the whole long list of irregulars—the sifting goes on all along the line.

In a certain sense this kind of exchange, informal or formal, is a desirable thing. In the abstract we claim to be just as much interested in the mental and physical ailments of one person as another. As a matter of fact, however, we cannot be as much interested in the recovery of some fool as in that of a higher order of being. There is a level of intellect, a brand of soul, that might just as well be in the hands and at the mercy of some chiropractor or religious charlatan. On the other hand, the intelligent and worth while gravitate toward the regular profession, and we take a sincere interest in their welfare from the medical standpoint. This may be heretical, but it is true.

Perhaps if we owned up and let it be widely known that the regular profession has no desire to expend

its energies upon the morons who find the irregular practitioners so attractive, save in emergencies, and if we were at some pains to establish the fact that such people really are in the main morons, the atmosphere would be cleared for the few worth while individuals who have been temporarily deluded.

The non-medical cults flourish in exactly the proportion that the "Under-Man" flourishes.

We see no need of a formal system of exchange; the intelligent patient is ours and the imbecile will continue to have his spine manipulated—a perfectly logical arrangement.

Any honest, uncommercialized doctor will admit that there is an elation about successful diagnosis and therapy in a wholesome human being that does not attend the cure of some bonehead. And does not a certain sense of the fitness of things settle over one when he hears that the feeble-minded individual whom he has been trying to advise rationally has sought out some smug healer?

The doctor has frequently been charged with a failure to meet the peculiar requirements of a certain class of patients, but we sometimes suspect that a healthy disgust has occasionally figured in his psychology.

Surgery

The Limits of Local Anesthesia in Surgery

Heinrich Braun, director of the city hospital in Zwickau, observes that in the last decades the difficulties and dangers of narcosis have been the occasion for serious study of local anesthesia in all its phases. The uses for local anesthesia have markedly increased; continuously increasing the sizes of the doses of anesthetics and always finding new anatomic points of attack where new dangers are being met.

On the other hand the technic of narcosis in the meantime has greatly improved. The restriction of chloroform narcosis, the development of the technic of ether narcosis, the introduction of AEC narcosis, the general principle of making the narcosis more superficial, and of grading the depth according to the different phases of the operation, and finally, the introduction of the ether jag by Sudeck and of the ethyl chloride jag by Kulenkampff and the limited use of intravenous narcosis—all have contributed to lessening the dangers to which the patient is exposed during and after induced anesthesias.

It is high time to determine the limits of both general and local anesthesia. True, there will be no *distinct* boundary, as between the two. Where on the one hand the indications for local anesthesia and on the other for general narcosis are in the balance, the character, the experience and the opinion of the operator will determine the choice as between them.

In special cases of local anesthesia, such as lumbar and sacral anesthesia, the situation is comparatively simple. Both are special methods, which, though of value in their limited field, will never impair the use of general narcosis. For if the limits of lumbar anesthesia are not respected, its mortality will doubtlessly be higher than that arising from the uses of a general anesthetic. Statistics of mortality of Franz and Mayer, 1 : 479 and 1 : 550, were taken from the experiences of recent years and were largely gathered from a number of personal observations. Besides there are the frequent reactions. They are due to the direct contact of the anesthetic with the meninges and the nerve substance and are the more dangerous the higher the anesthetic rises in the spinal cord. Lumbar anesthesia should therefore be restricted to operations in the region of the lower segments of the spinal cord, the urethra, prostate, vagina, bladder, rectum and the lower extremities, while abdominal operations, also those of the lower regions, f. i. hernia or gynecologic operations, necessitating the application of the anesthetic in higher regions, should therefore not be attempted. Trendelenberg's position and all other means by which the further spread of unsensitiveness is attained should be avoided.

Lumbar anesthesia is of value in cases of amputation for arteriosclerotic gangrene and for fresh injuries of the legs when the patients come to the operating table unprepared; this applies only if the patient can be turned over on his side without much trouble. The reduction of dislocations of the hip is more convenient in lumbar anesthesia than in narcosis. The former also facilitates the setting of fractures before the *x*-ray screen and the application of bandages. Finally I prefer to use it for operations on the back of the legs if the patients must lie on their stomach. In the course of all my hospital work I do not average more than 1 per cent. lumbar anesthesias.

Epidural or sacral anesthesia, if applied in the form of the so-called "high sacral anesthesia," is no more dangerous than lumbar anesthesia; it is free from the reactions of the latter, but its technic is more difficult and failures are frequent. Contrary to lumbar anesthesia secondary reactions consist in intoxication with the anesthetic. Experienced authors like Laewen and Schweizer advise not to exceed the dose of 0.4 or 0.5 novocain, at the most, for sacral anesthesia. This would eliminate "high sacral anesthesia" entirely and the method is limited to operations in the region of the plexus sacralis. Here, however, as is also the case with lumbar anesthesia, it has an important rival in local anesthesia, in the narrower sense, i. e. "parasacral anesthesia"; in the latter case the concavity of the os sacralis is filled with a weak solution of novocain; this blocks the plexus sacralis; it never fails and is practically free from reactions. According to our present experiences we cannot predict a great future for sacral anesthesia.

In the case of local or regional anesthesia in the narrower sense, conditions are more complicated. Aside from venous anesthesia which is used very little, surgery employs infiltration and conductive anesthesia obtained by injections of novocain-suprarenin solutions. This method, especially in its original form, was practically devoid of ranger and was therefore a far more successful rival of narcosis. I have, however, never reached the figures of some institutes of surgery where more than 90 per cent. of all surgical operations are made with local anesthetics. I have never scored higher than 50 per cent. Of 2,644 operations made in the hospital in Zwickau in 1920, 1,221 (45.8 per cent.) were made in narcosis, 29 (1 per cent.) under lumbar anesthesia, 1,394 (52.7 per cent.) under local anesthesia. Among the latter there were 138 cases of blocking of the plexus brachialis, 84 cases of anesthesia of the splanchnic nerve, 76 cases of parasacral anesthesia; paravertebral and epidural anesthesia had been abandoned. I do not believe that a still greater decrease in the use of narcosis is desirable, for narcosis is indispensible and should therefore be used where necessary; this is not possible if 90 per cent of all operations are made without narcosis.

In certain cases the psychic condition of the patient contraindicates the use of local anesthetics. It is entirely wrong to frighten the patient. A large number of patients who seem unsuitable for anesthesia may be prepared for such an ordeal by treatment with scopolamine and morphine. In the case of more serious operations which are to be made under local anesthesia, I am a warm advocate of such preparatory treatment. Following the method of Kroenig, the patients are brought into the operating room blindfolded and with cotton in their ears so that later they generally have only a very indistinct recollection, or none at all, of what took place.

On the whole the intoxications caused by the resorption of novocain determine the limits of local anesthesia. They depend on the size of the dose of novocain, on the place of introduction and especially on the rate at which the administered drug is resorbed. As suprarenin retards resorption, it is important that the solutions contain effective, undeteriorated novocain. Without suprarenin, the use of local anesthetics would be much more limited. Unintentional, intravenous injection, which may prove fatal even in small doses, can always be avoided by correct technic. Injections with the hollow needle should never be made before ascertaining that there is no backflow of blood, which would indicate that a vein had been pierced.

Slight secondary reactions, such as nausea, vomiting, temporary irregularity and weakening of the pulse, dry sensation in the throat, sleepiness, etc., may occasionally follow the administration of even small quantities of novocain solution and may be observed at all operations. My experience, which extends over many thousands of cases, is that if local anesthesia is employed within certain limits, such reactions are not frequent enough to be expressed in percentage figures and do not influence indications for its use. More serious forms of novocain intoxications are still less frequent with the old method of local anesthesia; sleeping conditions, in which the sensibility of the whole body has disappeared (A. W. Mayer), deliriums, cramps—appearing immediately after injection, are practically always indications of intravenous injection—collapse. Their occurrence became more frequent, and gained a bearing on indications at the time when local anesthesia attempted to solve new problems which required new methods of administration and involved large doses. In cases of intoxication following injections it has been found that the drug was administered very near the spine and the intervertebral passages.

If we want to determine the limits of local anesthesia we need not consider minor surgery, for there its use is unlimited. In the case of short operations in infected regions, many practition-

ers prefer to induce a state of semi-consciousness rather than to use a local anesthetic. As to other operative situations, the limits of local anesthesia coincide with the boundaries of major surgery.

In major operations of the brain and the skull, intoxications with novocain need not be feared. Local anesthesia has many advantages over narcosis; as f. i., anesthesia and operation take place consecutively and ischemia makes an operation in two stages unnecessary. Patients with pressure on the brain are endangered by narcotics (paralysis of the respiratory organs). But the virtues of local anesthesia in operations on the brain are not undisputed as the sensitiveness of the dura near the base of the cranium cannot be entirely eliminated as a danger point and a forced opening of the skull without narcotics cannot be expected of everybody, especially as morphin and scopolamin can only be used with great precaution on patients with pressure on the brain. Thus it will be necessary to decide each case individually. Frequently the most convenient and at the same time the most sparing method for the patient will be to combine local anesthesia with a short superficial narcosis.

There is no denying the value of local anesthetics for operations on the jaws, the face, the oral cavity and the pharynx. Resections of the upper jaw, operations for tumors in the nasopharynx, with all preliminary operations, operations for carcinoma of the tongue, etc., have assumed a different aspect since the introduction of local anesthesia. These operations can now be easily conducted without loss of blood, preliminary operations for blood saving and tracheotomy being no longer required. The dangers of these operations, principally due to aspiration pneumonia, have practically disappeared.

In these operations therefore there seems to be no limit to the uses of local anesthesia, especially as serious reactions have very rarely occurred. Only injections into the Gasserian ganglion are not free of danger and should therefore only be employed in exceptional cases.

As regards operations on the neck and throat, attempts to block the plexus cervicalis, near the spine, have proved a failure (paravertebral anesthesia). In a very short period 9 serious intoxications and 3 fatalities resulting from these injections have been published, in spite of the fact that the doses of novocain administered were very small. This method must therefore be abandoned. If both sides of the posterior margin of the sterno-cleido-mastoid muscle are infiltrated subfascially and subcutaneously, complete insensibility of the anterior of the neck is obtained. In strumae another injection is added on both sides of the upper part of the thyroid near the A. thyreoidea sup. This method is very satisfactory and does not entail reactions.

Practically all cervical operations are performed under local anesthesia, especially the slitting of the larynx and the extirpation of the same, also operations on the cervical part of the esophagus (diverticulum, foreign bodies). In these situations there is no rival to local narcosis. Likewise for struma most surgeons prefer local anesthesia to narcosis. Because of their physical condition not all patients affected with Basedow's disease are suited for local anesthesia.

In thorax surgery the use of local anesthetics is limited to operations on the walls of the chest. It is indicated in empyema, in pulmonary abscesses where the danger of aspiration is greatly increased by narcosis, in the surgical treatment of pulmonary tuberculosis, and in subphrenal abscesses. Injections should not be made too near the spine, but intercostally at some distance. The same arguments that were mentioned against paravertebral anesthesia of the cervical part of the spine also obtain for the thoracic portion. In Sauerbruch's opinion local anesthesia is not indicated for operations in the thoracic cavity inasmuch as intrapleural manipulations on a patient who has not received any narcotics causes cessation of the heartbeat, stifles respiration, etc.

In Germany operations which involve the walls of the abdomen or of organs which lie just below the same and are easily accessible are generally made under local anesthesia. Even for the abdominal Cæsareon section a complete local anesthesia of the walls of the abdomen is sufficient.

The following may be said on capital intra-abdominal operations: Pulmonary complications after abdominal operations are generally due to conditions other than narcosis and the number of such cases will not be materially diminished by the use of local anesthetics. Nevertheless the attempts to exclude narcosis also in such operations is justified, for the general condition of the patients who have to undergo protracted abdominal operations is influenced more unfavorably by narcosis than by local anesthesia.

Mixed anesthesia constitutes a decided progress; local anesthesia of the walls of the abdomen, preliminary treatment with scopolamin-morphin, and the use of short periods of narcosis where necessary. Patients, thus treated, leave the operating table in a better condition than patients who have been treated with protracted full narcosis. Attempts to eliminate narcosis entirely have only been successful as far as the upper part of the abdominal cavity is concerned (operations of the stomach and the gall bladder). For the above mentioned reasons paravertebral anesthesia is to be rejected as taking too much time. Blocking of the Nn. splanchnici (Kappis) combined with local anesthesia of the walls of the abdomen makes the upper region of the abdominal cavity non-sensitive. Contrary to Kappis, who injects with a hollow needle from the back, I prefer to open the abdomen so that I can see and feel the anterior portion of the spine which is infiltrated with novocain between the two peduncles of the diaphragm. We have performed far more than 300 operations on the stomach and on the gall bladder with this method; we never had any reactions and hardly any failures.

In operations for peritonitis and ileus, where it would seem particularly desirable, local anesthesia has not proved satisfactory. Also for appendicitis, narcosis will be the method generally employed and local anesthesia will only be used in exceptional cases.

In kidney operations, all indications point to avoidance of a long narcosis; and if the operation only involves one side, a satisfactory local anesthesia may be obtained without the use of large doses of novocaine.

An important, technically simple method, which is practically free from reactions and one which fails very rarely is parasacral anesthesia. It produces insensibility for all operations in the region of the plexus sacralis, operations on the urethra, the prostate and the bladder, vaginal operations and operations of the rectum. It is of great importance for prostatectomy, for perineal and sacral operations and for cancer of the rectum.

For all operations in the mentioned regions, local anesthesia should be the rule and the use of narcosis the exception. As regards operations on the extremities, we may restrict our observations to the blocking of the plexus brachialis according to the method of Kulenkampff, which, judging from the literature published on the same, is widely used. There is little danger of intoxication with this method. But two other drawbacks have appeared. One is of a rather serious nature; puncture of the pleura and the lungs near the left rib has repeatedly caused very serious pleuradynia and a few fatalities have resulted. This danger may be avoided if the plexus is not punctured near the first rib, but, following the method of Mulley, three finger breadths above the clavicle. With a little practice the puncture may be made here just as well as above the first rib. It remains to be seen, however, if the proximity of the spine does not give rise to other complications.

The second danger, which is of a less serious character, is the possibility of a protracted injury of the nerves in case of intraneural injection. This danger threatens in every nerve puncture. Even if a perfect solution is used—this is of course of the greatest importance—the mere puncture of a nerve and a resulting hematoma may cause such temporary injuries. Some of the few cases of protracted paralysis in the region of the plexus brachialis which have been mentioned in medical literature may be due to the improper use of Esmarch's bandage. True, in the case of Haertel and Keppler there is no such possibility. Happily this reaction occurs so rarely that it cannot be regarded as a contraindication for this method.

Paralysis of the N. phrenicus and sympathicus which usually accompany the blocking of the plexus brachialis, is without importance.

This method is especially valuable for injuries and phlegmonae of the hand and the lower arm, particularly so if the patient comes on the operating table without preparation as is frequently the case in policlinics. It greatly facilitates the setting of fractures when the *x*-ray is used. As far as the lower extremities are concerned, all methods which are to produce insensibility of the entire transverse section of the thigh and the leg are far more complicated; this applies not only to conductive anesthesia at the radix of the limbs, but also to the so-called transverse infiltration and venous anesthesia. In spite of the fact that some surgeons who have had sufficient time have had favorable experiences with the same, this method will never be used as widely as the method of blocking the plexus brachialis. In my opinion this is the field for lumbar anesthesia in cases where the avoidance of general narcosis is necessary or where local anesthesia offers technical advantages.

Local anesthesia in the narrower sense is therefore the only method of anesthesia which has proved a successful rival of narcosis. In spite of the great improvements in the technic of narcosis, local anesthesia will, if only its natural limits are respected, remain a less serious intervention into the organism of the patient when compared with a long narcosis and in 50 per cent. of all surgical operations it can successfully replace the former. On the other hand narcosis will never become entirely dispensible and its technic should therefore not be neglected in favor of local anesthesia.—(*Deutsch. med. Woch.*, 1922, No. 5, p. 151.)

Public Health

Dispensary Standards

The Executive Committee of the Associated Outpatient Clinics of New York City has drawn up some practical standards for outpatient clinics which it submits to the medical profession for comment and criticism.

The physician's interets in the dispensary is or should be paramount. The dispensary is a most important place for the patient unable to pay private fees, and for the physician himself is a field of work in which he maintains his interest in the study of diagnostic and treatment methods.

Our readers are asked to express themselves fully and frankly to Dr. Alec N. Thomson, of the staff of the Associated Outpatient Clinics upon this matter at 15 West 43rd Street, New York City.

Scope of Responsibility of Out-Patient Clinic.—It is the responsibility of an out-patient clinic to provide correct diagnosis and adequate treatment for ambulatory patients; to instruct its patients so as to assist in the prevention of disease; to aid in investigation of the causes of disease and of methods of treatment and prevention; and to provide educational facilities and useful experience for physicians, nurses, social workers, and others concerned with the care of the sick, or the promotion of health.

Community Relations.—The out-patient clinic must comply with the dispensary law and the regulations of the State Board of Charities, the City Department of Health, and other public authorities.

Those policies of out-patient service which affect private medical practice should be established and revised as necessary, in consultation with the medical profession of the community through appropriate representatives.

The out-patient clinic should co-operate with charitable societies and other agencies through examination of their beneficiaries and reporting the findings (under proper professional restrictions) to the societies interested.

General Organization.—The board of trustees should have an out-patient committee or its equivalent. There should be an out-patient committee of the medical staff. There should be an executive head for the out-patient clinic, to whom all administrative personnel shall be responsible.

Relation to Hospital.—The out-patient clinic furnishing diagnosis and treatment of the sick for more than special conditions or minor ailments should be affiliated with a hospital.

When an out-patient clinic is part of a hospital, the executive head of the out-patient department should be responsible to the superintendent of the institution.

Medical Organization.—The professional staffs of the hospital and the out-patient department should constitute one organi zation, not separate staffs.

The director, or responsible head, of each service should be continuously in charge.

Each department of the out-patient clinic should have a chief who should be continuously responsible for carrying out the medical policies and maintaining the working standards of the clinic.

Adequate consultation facilities among the various departments (including refer and transfer of patients) should be available.

In order to promote co-ordinated medical work, the professional responsibility for each patient at any one time should be fixed upon a single department or physician.

Interns should be assigned a definite service in the clinic, under staff supervision.

Staff conferences for discussion of both ward and clinic cases should be held at regular intervals.

In the out-patient clinic the physician should be relieved as fully as possible of duties not directly concerned with the professional care of the patients. Such non-professional duties should be delegated to trained technical assistants—executive, nursing, social service, clerical, etc.; the number and assignment of such assistants depending upon the volume and the nature of the work.

Facilities, Equipment and Procedure.—Adequate facilities and equipment should be provided to make possible the satisfactory diagnosis and treatment of patients. The minimum facilities required in the way of space, equipment, conveniences for patients, and the best procedure within the clinic, will vary with the types of disease treated, and should be recommended by the various professional groups or sections of the Associated Out-Patient Clinics.

Admissions.—In determining the admission of individual cases to an out-patient clinic, three factors need to be considered; namely, the income of the patient or family, the size and responsibilities of the family according to a reasonable standard of living, and the character and probable cost of adequate medical treatment for the disease or condition found.

Each institution should formulate its own standards for the admission of patients, depending upon the kind of work done and the policy of the organization.

The gathering of social and financial information necessary to determine admission under the above policy should be performed by a person with training in social work.

Appointment System.—The admission of patients should be by appointment at a definite day and hour, as a measure conserving the time of physician and patient, and economizing with space and equipment. An appointment system should be devised by each out-patient clinic.

Limitation of Numbers.—The number of patients admitted during a given session should be controlled in proportion to the facilities available in relation to space, equipment and personnel. Standards defining the maximum number of patients who should be seen by a physician during a given period should be outlined by the various professional groups or sections of the Associated Out-Patient Clinics.

Fees.—It is desirable that stated fees be charged patients for admission and that additional charges be made for medicine, appliances, and other special procedure or material.

Fees should be remitted in whole or in part to patients unable to pay, unless adequate treatment can be assured through reference of such patients to public agencies.

The fee list should be posted in appropriate places in the institution.

Records.—The medical records should be filed centrally.

All the records of each patient should be filed together.

The records of the in-patient and the out-patient should be unified as completely as possible.

Records should not be carried or inspected by patients.

Definite responsibility should be fixed for the supervision of records as to completeness and as to proper care.

Standards for records should be outlined by the appropriate professional group or section of the Associated Out-Patient Clinics.

Social Service.—Social service in a hospital or out-patient clinic is for the purpose of aiding the physician in dealing with those factors in the personality and environment of patients which bear upon the medical situation.

The social service department should be an integral part of the institution.

The head worker or director of the department should be responsible to the chief executive of the institution.

There may be an auxiliary or advisory committee composed of lay persons interested in social work, and of members of the medical staff and board of trustees. If there is such a committee, the superintendent should be a member and the head of the social service department should meet with the committee ex officio.

Follow-up.—It is the responsibility of the out-patient clinic to endeavor to retain the patient under treatment until discharged by the physician.

It is the responsibility of the physician to determine what instructions shall be given patients, to indicate when patients should return, and the conditions under which delinquent patients shall be dropped, or be followed up by mail or by personal visit.

It is the responsibility of the social service department to assist the physician in the instruction of patients, ascertain facts pertinent to their continuance of treatment, maintain an "expected return" index, review the records of patients, and after presentation of facts to the physician, to carry out or to supervise efforts to bring the patients back to treatment.

Results should be reported monthly.

A follow-up system may be applied to an entire out-patient clinic, or only to selected types of cases. It is preferable to employ a thorough follow-up system for a selected disease or group of diseases, rather than a partial or incomplete system to a larger group.

Accounting.—The financial accounts should show (a) the receipts from the various classes of fees for the out-patient clinic as a whole and for each section; (b) receipts from all other sources, as from endowments, public funds, etc., suitably classified; (c) expenses for the clinic as a whole and for each section, classified into the following divisions:

1. Medical payroll
2. Non-medical payroll
3. Supplies and material
4. Overhead expenses
5. New equipment.

Statistics.—A statistical report covering at least the following items should be made monthly and consolidated annually:

New applicants

Number of new applicants admitted, classified by departments to which admitted.

Number of applicants rejected

Total persons admitted, classified by departments to which admitted

Total number of visits, classified by depatments to which made

Number of transfers and refers among departments.

Annual Report.—The annual report of the hospital should include a report on the out-patient clinic and this should contain (a) statistics, (b) financial facts, (c) a statement of past work and present problems, made by the medical staff, the superintendent, the board of trustees, or any or all of these authorities.

Districting.—It is desirable that each institution should limit admissions to patients residing within a definite area.

This should not prohibit teaching institutions from the admission of cases of importance from the standpoint of medical education, irrespective of residence.

Conference between representatives of institutions should be arranged for the co-operative determination of such areas, based upon the location and facilities of other institutions doing similar work.

Applicants at an out-patient clinic who are found to have been recently under treatment at another agency should, as a general rule, be referred back to that agency.

Adaptation of Clinics to Clientele.—Evening clinics for working people are desirable in most out-patient clinics.

Such special clinics should be establised as meet the peculiar needs of the people or the district served.

Special effort should be made to enable the clinic to deal satisfactorily with persons not speaking English.

Appraisal of Results.—There should be periodical surveys of the work of the clinics as a whole and of each section, for the appraisal of results and the improvement of methods.

Correspondence

Diagnosis, Cults and Other Things

To the Editor of The Medical Times:

Contributions which have recently appeared in lay periodicals relating to the subject of Osteopathy and Chiropractic have been interesting from several points of view. In the September number of the *Atlantic*, editorial excuse for introducing the game of shuttle cock correspondence is found in the statement that good is to be found in these schools. This seems to be a fair statement. Were it not for the good in these schools of practice they could not thrive, despite their skilled, expensive advertising.

Dr. Cabot, of Boston, in a notable contribution showed that the proportion of wrong or incomplete diagnoses made by regular physicians and checked up at the Massachusetts General Hospital reached surprising proportions. These wrong or incomplete diagnoses were made by men of Massachusetts education quality. Now for the other side of the question. Osteopaths, Chiropractors and Naprapaths seem to find the question of diagnosis a simple matter, even though they are not men of academic and scientific training of the sort belonging to Boston's regular physicians who make so many mistakes in diagnosis. (These mistakes are below the average proportion for the country at large.)

The three kinds of cultists in question find something wrong with the spinal column and rest most of their diagnosis upon that strong prop. Not one of the three agrees that either one of the other two is correct in its idea of what is accomplished by "spinal adjustment." The school boy stepping into a butcher shop and noting a long section of the spinal column of any sort of animal will probably see at a glance that neither one of the three kinds of cultists would really be able to make an adjustment or keep an adjustment in place provided that it could be made.

On the occasion of a legislative hearing, I once asked one of these cultists who appeared to be a pretty sensible sort of man why it was that he was willing to deceive people on the subject of "moving bones." He laughed and replied at once, "Don't you doctors give bread pills to patients?" That is it. Spinal adjustment is a bread bill which opens the way for the cultist to get in massage and suggestion.

Let us get down to a pragmatic point of view for a moment. Ross and Sherrington many years ago showed that various internal viscera have representation in external areas of the body by way of certain nerve connections. Head classified some of these and mapped out the areas belonging to certain organs. Massage and manipulation combined with suggestion, convincingly placed, will work wonders for many kinds of patients in the hands of cultists. There will be many patients who are actually relieved or sometimes cured after responsible members of the medical profession have failed to bring about similar results. On the other hand those of us who are engaged in surgical work find in our everyday experience cases of appendicitis or of gall bladder infection that have been carried quickly to desperate conditions by cultists who employed the captivating statement that their methods would "empty" the appendix or the gall bladder. We see cases of cancer and tuberculosis seriously damaged often beyond hope of recovery by the work of cultists. What does this all mean? It means that the days of Alexander Von Humboldt in which one man could comprehend all of the natural sciences have passed. The sum total of knowledge in medicine as in other sciences and arts has become so enormous that no one man can honestly feel himself to be up-to-date in any one department of medicine. The best equipped men in the profession are the ones who give best insurance against accident to a patient.

The doctors who are to be trusted on the whole are the ones whose minds have been trained along planes of tried-out educational method. Cultists in medicine are not so well prepared to give insurance against accident to a patient. If one half of all diagnoses made by honest physicians are wrong or incomplete the proportion of wrong diagnoses made by cultists must be in proportion to their fragmentary education. Treatment offers safety for a patient in proportion to the wholesomeness of education on the part of a doctor.

ROBERT T. MORRIS, F.A.C.S.

Note.—We note that the *Atlantic* carries an osteopathic advertisement. This is in keeping with the recent declension of the *Atlantic* at all points, literary and otherwise. The *Atlantic* lost its soul during the war and has never recovered its moral health. It is our judgment that it never will.—ED.

The Law of Sex Determination

To the Editor of THE MEDICAL TIMES:

Searching for things as yet unknown is like following the example of the Athenians, who spent their time to tell or hear some new thing.

The question of sex control has been much on the mind of the Scientists, and many theories have been advanced. For a number of years, the subject has given me much concern. Inasmuch as I believe the theory I am about to advance is new, I appeal to my readers, to carefully consider before condemning.

To be explicit, the thought is—that *nature controls*—to *save extinction* of sex.

Vibration is life, and we begin to die as soon as born. Every unit or cell, or product of same, vibrates according to the life of the individual, from which it emanates.

When the ova is liberated from the ovary, it vibrates according to the life of the parent cell. With age the velocity increases, but vitality decreases the nearer it approaches destruction. The same reasoning applies and governs the life of the spermatozoa. The moment the germ penetrates the egg, as they come together, the one registering the highest velocity of vibrations, showing that it is nearest death, nature determines the sex of the unit of offspring to take its place. Possibly this might explain, why more males are born in post-war times.

Exceptions and modifying influences in connection with the subject before us, are many and varied, and cannot be passed over lightly. However, to lay down a working basis, other conditions being equal, aged or exhausted males, mated with vigorous or young females, male offspring should predominate, and visa versa. Acting upon this line of thought, testing with animals, and under circumstances not most favorable, I obtained twenty-six males out of a possible thirty-four.

I should be glad to know if any of your readers have investigated, or experimented along these lines, as the findings might be instructive and valuable.

H. W. SCOTT, M.D.

454 Edmonton St., Winnipeg, Man.

Vascular Syphilis.

Etienne states that aortitis is extremely frequent in syphilis. Simple aoritis without lesions of the sigmoid valves or aneurysmal dilatition forms about 40 per cent. of all the aortic localizations of syphilis. Aneursm was found in 30 per cent. of Etienne's cases, an unusually high proportion. As regards the clinical symptoms of syphilitic aortitis, sometimes the condition is entirely latent, while in others serious symptoms arise with alarming suddenness. Pain assumes a different character according to the patient. In one of Etiennes' cases it was situated in the epigastric region and recurred in violent gastric crises, as in tabes. The autopsy, however, showed that it was due to a supra-sigmoid aortitis with stenosis of the coronary arteries. As regards treatment, Etienne prefers mercury to the arsenicals, which may expose the patient to the risks of oedema of the lung. There is the same danger with potassium iodid when renal insufficiency is present. (*Arch. des mal. du coeur*, October, 1921.)

Neurosyphilis.

Magnus quotes American writers on the prevalence of neurosyphilis, and says that his own experience with 232 cases in private practice is that 20 per cent. of syphilitics have some form of neurosyphilis. In his 232 cases, 96 had had no treatment before, and only 10 had been treated with arsphenamin in the first stage of the infection. His analysis of these experiences confirms the necessity for systematic examination of the spinal fluid as the only means to ward off grave neurosyphilis. (*Norsk Mag. Laegevide.*, January, 1922.)

Smallpox Again Spreading in New York State.

A threatening outbreak of smallpox on the St. Regis Indian Reservation which began early in September has only been checked by a wholesale campaign of vaccination directed by the State Department of Health. In spite of all efforts, however, the infection has spread to other communities in northern New York and it will indeed be fortunate if the next few months do not bring a considerable increase in the number of cases. During the past year smallpox has prevailed extensively in Canada and Connecticut, and within the last two weeks a dozen cases in western New York have been traced to a source in Ohio. Altogether 146 cases of the disease have been reported in New York State, outside of New York City, since the first of January of this year. With repeated local outbreaks and constant danger of infection being brought across the border lines, the State Commissioner of Health, Dr. Hermann M. Biggs, considers the situation sufficiently serious again to urge upon the public the importance of vaccination, and the Department is preparing special posters to be put up in railroad stations and public places throughout the State.

The recent outbreak of the disease on the St. Regis Reservation resulted in 29 cases and caused the State Department of Health to take energetic measures to prevent a further invasion of northern New York. An epidemiologist was sent from Albany to co-operate with the district sanitary supervisor, Dr. S. W. Sayer, and with the local health officers and physicians in vaccinating all residents of the Reservation who could be reached. During the past two or three years smallpox has made its appearance a number of times either on this Reservation or in the adjoining towns. In most instances it has been possible to trace the source of the infection to communities across the border, since the Reservation covers territory in Canada as well as in this State. In 1917 an extensive outbreak of smallpox on the Cattaraugus Indian Reservation resulted in 96 cases, and necessitated an expenditure of thousands of dollars from State funds before the disease could be checked. With this experience in mind, and desiring to avoid the expensive procedures entailed by officially declaring an epidemic, the Department made every effort to carry out wholesale vaccination by enlisting the co-operation of the Indian Chiefs, the clergymen who officiate on the Reservation, and above all the physicians of Hogansburg, Ft. Covington, Helena and Massena who provide medical service to the Indians. These efforts were so far successful that a majority of the non-immune Indians were vaccinated in three days by the two Department representatives aided by two local physicians. Many of them were brought to schools or other meeting places and others were vaccinated on the roadside or in their homes. About half of the three thousand Indians on the Reservation live on the American side, and of these 1,150 have now been vaccinated. The Department has communicated with the Canadian officials at Ottawa urging that a similar campaign of vaccination be carried out on the Canadian side.

Up to date only two cases have been reported outside of the Reservation as a result of the outbreak among the Indians. On September 13th Dr. C. R. Hervey, Sanitary Supervisor, reported that two Indian girls coming from the St. Regis Reservation were ill with smallpox in Watertown. The girls had left the Reservation on August 14th and had gone to work at a hotel in Carthage. It is probable that at least one of the girls had the disease when she came there, but it was not recognized and both continued their duties as chambermaids during their illness. They did not come in contact with the guests, and the other employees avoided them because of their appearance due to the eruption. The proprietor finally dismissed them and they took a public bus from Carthage to Watertown and went to live with relatives in that city where they were apprehended by Dr. Barnett, the health officer, and taken to the isolation hospital. In spite of all efforts to reach those with whom they had associated, there are enough undiscovered contacts with these two cases to start an extensive outbreak, and only good fortune can seemingly prevent its occurrence. The local authorities throughout Northern New York are closely watching the situation.

An entirely separate focus of smallpox has since developed in the Western part of the State. On September 20th Dr. Edward Clark, Sanitary Supervisor in Erie and adjoining counties, investigated a number of cases of smallpox at Jamestown and traced them conclusively to an unvaccinated girl of seventeen who had returned in July from a visit to Canton, Ohio, where her brother's wife had been ill with a fever. She developed smallpox herself soon after returning to Jamestown, and seven other cases followed in her family. One of these communicated the disease to two of his fellow factory workers, while another outside case in a child appears to have come from the same source. All of the families where cases exist were promptly quarantined, and all known contacts were vaccinated. One of the girls in the family went to work in the five and ten cent store in Jamestown three weeks after her illness and another one went to work in a factory. The employees of both places have been investigated and are under observation.

In a Hospital

IGNATIUS I. MURPHY
Author of "Behold the Flag."
St. Elizabeth's Hospital,
Lincoln, Nebraska

On beds of pain the stricken lie,
The hours passing slowly by,
While Life and Death their vigil keep
For some must die and some must weep.

Minist'ring angels come and go,
Black-robed Sisters pass to and fro,
Of calming touch and soothing word,
No gentler voices ever heard.

The busy world beyond the pane
From which to these white cots we came
Recks little of the absent one,
The ranks ar filled e'er day is done.

A moan, a groan, the Spirit's nigh,
A pallor strange, the last, last sigh,
Fond hearts breaking—from anguished bed,
Perhaps to God a soul has sped.

But doctor, nurse and chaplain's prayer
A hopeful, healing message bear
And many walk the sunlit way
Of health and strength in brighter day.

Oft souls are saved in House of Pain,
For vows are made to live again
In better lives and kinder deeds
By suff'ring ones in hour of need.

Helpless, indeed, humanity,
Face to face with eternity,
Yet House of Pain, affliction's rod,
May serve for all as House of God.

The Journal of Intravenous Therapy.

During the past five years there have appeared in medical journals increasing numbers of articles on the subject of intravenous medication. A survey would indicate widespread employment of intravenous therapy in clinics and private practice.

It is evident that the difficulties and dangers associated with the injection of large volumes, as was carried on as a hospital procedure, have been overcome. In the face of prejudice engendered by the injection of large volumes of extemporaneous solutions, the pharmaceutical work of Loeser has demonstrated that what was an impractical hospital procedure, could be converted to a safe and practical office and bedside technic.

Reports on clinical work done with Loeser's Intravenous Solutions in this country and abroad have brought about renewed interest in this more accurate and scientific method of administering remedies. Realizing that intravenous injections is a serious procedure at all times, Loeser has developed methods of standardization that safeguard the patient and physician. Intravenous solutions require a higher standard than any other pharmaceuticals. It is a special field of work that demands specialized attention.

The demonstration of the safety and practicability of intravenous medication will prove of much benefit to the profession. This demonstration could only have been accomplished with standardized, accurate, intravenous solutions.

The October number of the Journal of Intravenous Therapy contains many interesting abstracts on intravenous medication from American and foreign medical journals. If you have not received your copy, write in for it. Journal of Intravenous Therapy, 100 West 21st Street, New York City.

Formol-gel Reaction in the Blood Serum of Syphilitics.

From the Pathological Laboratory, the Montreal General Hospital. Watson compares the formol-gel test with the Wassermann reaction, testing the sera of 21 patients by both methods. Author finds that there is agreement between the two methods in 65% of the cases and concludes that the formol-gel test is not as reliable as the Wassersmann reaction.—(*Canadian Med. Ass. Jour.*, July, 1922.)

A Dependable Antiluetic

INTRAVENOUS: Usual dose 0.1 gram, repeated every 2 or 3 days for 10 or 12 doses.
INTRAMUSCULAR: Usual dose 0.05 gram, repeated every 4 or 5 days for 10 or 12 doses.
Courses of Mercurosal injections should be alternated with arsphenamine treatments.

WHEN spirochetes become arsenic-fast—tolerant of arsenic so that, temporarily at least, no further impression can be made on them with Salvarsan or its derivatives—mercury becomes the sheet-anchor of antisyphilitic treatment.

In the short time since our Chemical Research Department developed Mercurosal, trustworthy evidence has accumulated to justify the conviction that this new synthetic compound is a dependable antiluetic, well adapted for administration by the intravenous or by the intramuscular route.

Clinical improvement following Mercurosal injections has been observed to come rapidly. In many cases, too, the sudden disappearance of a seemingly persistent Wassermann reaction has been clearly attributable to the Mercurosal treatment.

Low toxicity. Relatively high content of mercury. Organic combination similar to the combination of arsenic in salvarsan. May be administered intravenously or intramuscularly with a minimum of discomfort to the patient.

New Literature
Just Off the Press

Mercurosal Reprints

Gland Therapy

Booklet on Biological Products

Gladly sent physicians on request.

Parke, Davis & Company

MENSTRUAL DISORDERS

A large proportion of the patients treated in a physician's practice are women suffering with some derangement of menstrual or generative function. These disorders are due in large measure to diminished or disturbed function of the glands of internal secretion. Owing to the reciprocal relationship that exists between these glands, a functional disorder of them is, in its last analysis, always a pluriglandular disturbance—never a monoglandular malady. As Blair Bell puts it: "A woman is what she is on account of the sum total of her internal secretions."

Hormotone

which is a combination of thyroid (1/10 gr.), entire pituitary (1/20 gr.) ovary and testis, gives a physician the best of opportunities to prove the superiority of a pluriglandular product over the administration of ovarian substance alone.

Dose: One or two tablets three times daily before meals

G. W. CARNRICK CO.

416 Canal Street **New York, U. S. A.**

DR. JUNIOR: "Before we go in, Doctor—you often speak of aborting pneumonia."

DR. SENIOR: "That is something which seems to you impossible——"

DR. JUNIOR: "Well, pneumonia—once it is clearly diagnosed—being a bacterial disease——"

DR. SENIOR: "Exactly. But, without the other inflammatory concomitants—impeded circulation with stasis—dead and dying (that is starved) blood cells—red and white; congestion of parts, favoring the pneumococcus with ample sustenance—; all these so-called mechanical factors, can be quickly, safely, antiseptically relieved by the prompt application of Antiphlogistine."

DR. JUNIOR: "It looks like plain, common sense, Doctor——"

DR. SENIOR: "Which all true science is. It is 'plain,' that is logical. It is 'common,' that is in the meaning that it belongs to everybody. The only trouble is that a few of us wish to keep ourselves excluded from the common lot."

DR. JUNIOR: "After all, though—my idea of a physician is the man who seeks first the relief and comfort of his patient, and who, having done his best to effect that, employs his leisure to go deeply into the mooted questions of scientific discussion."

DR. SENIOR: "In treating pneumonia do not overlook the important fact that Antiphlogistine assists the patient to exactly what he absolutely requires, Ease,—Rest,—Sleep——"

Chancellor Capen's Inaugural Address

Dr. Samuel P. Capen, former director of the American Council on Edcuation, in his inaugural address as chancellor of the University of Buffalo, N. Y., Saturday, October 28, levelled constructive criticism at higher institutions generally and expressed the hope that the U. B., because of its freedom from the fetters of tradition, might set an example in overcoming the conditions he mentioned.

Viewing American higher education in its cosmic aspects, Dr. Capen said, certain disconcerting facts immediately are evident. Nearly every type of institution, except the agricultural college, is overcrowded, congesting being most pronounced in colleges of arts and science. At the same time, he held, there is a general belief that the intellectual morale of college students has declined. The explanation most frequently given for this, he explained, is the "lack of motivation of the college of arts and sciences."

Some of the educational conditions that need to be corrected, Dr. Capen said, are:

A The period devoted to elementary education is too long. Efficiency is offset by new subjects crowded into the curriculum and proof is wanting that the so-called enrichment of the elementary curriculum has increased pupils' intellectual power.

B Secondary education begins too late and ends too soon, failing to comprehend the whole period of formal training. It is too diffuse and therefore superficial, providing very imperfectly for the preparation of those who straightway must earn a livelihood.

C Fifty per cent. of the work done in colleges of arts and sciences rightly belongs in the secondary schools, so that it becomes necessary to provide teaching methods and disciplinary regime in college for immature boys and girls rather than for men and women seriously entering upon preparation of their life work. There is a prodigal waste of time in college.

Ignoring for the moment the splendid achievements of the professional schools, the first things clamoring for rectification is the fact that Americans enter upon professional careers at least two years later than citizens of other countries and the delay constantly is being increased by professional interests themselves which seek to extend the time devoted to training and impose higher requirements without reference to their effect on the educational scheme as a whole.

The three obvious steps to provide for the regeneration of education, Dr. Capen declared, are:

A Adminsison to college and continuance there should depend on far more searching process of selection than any that now prevails. The creation of tests all the time is going forward, but the ultimate decision as to whether a student is qualified to remain can justly be made, "if the moral courage of the faculty can stand the strain."

B As early as possible in the college course there should be provision of opportunities for independent study, carried on in the spirit of research without meticulous oversight and with judgment only of the final result. None should be allowed to graduate who have not demonstrated their capacity for independent study and registered definite mastery of some field of knowledge.

C The college should adopt all means possible to place secondary education where it properly belongs, and enter into co-operation with the school systems from which the majority of its students came for establishment of methods of redistribution that will prove of advantage to college and schools.

"The college of arts and sciences must be regenerated or it will die," Dr. Capen said. "It will be cut up into a multitude of professional divisions and disappear. Similarly, much of the confusion that now exists in the relation of the college to the professional schools could be cleared up by studies designed to reveal just what general information and what knowledge of special subjects are actually necessary for the several professional courses.

"Organizations of doctors, lawyers and dentists are forcing the universities both to extend the period devoted to training in the professional school and to impose higher and higher requirements in the way of preliminary education. Moreover, the demands of each professional group are made without reference to their effect upon the education scheme as a whole.

"If my analysis is correct," Dr. Capen continued, "it is clear that the United States faces the need of drastic and thoroughgoing reform in its whole scheme of education to the end that our children and our youth may be more effectively trained, and that time may be saved in the process. The reform demanded does not consist of the mere readjustment of the mechanism of administration. It must go to the heart of the undertaking. It must deal with the content of subjects and courses. These must be definitely related to the future careers of the students who pursue them.

"The various kinds of professional training must be re-examined with fresh reference to the demands of the professions themselves. And the chaos that prevails in the relationship of the college to the professional schools must shortly be reduced to some kind of order. I am persuaded that both these ends could be furthered by a type of educational research that has rarely been applied to higher education.

"There is a phrase that gained wide currency during the war. It may be offensive to chaste academic ears, but it is very expressive. It is 'job analysis.' Now, job analysis has recently been effectively employed to determine the content of the courses of training for all kinds of artisans. Is it impertinent to propose that it would be very useful in the field of professional training also?

"If we could have a series of job analysis of the various professions, I venture to predict that they would be highly suggestive to those charged with professional education."

Dr. Capen remarked that wide difference used to exist between the intellectual morale of Eastern and Western students, the Westerners as a rule being more serious and diligent, whereas the so-called effete East contained a larger proportion of idlers and those who went to college because they were sent there. Reports now suggest, he added, that "these differences have been leveled. The intellectural morale of Western institutions may still be somewhat higher but in the West also a marked decline is apparent."

Commenting upon the British honors' system, Dr. Capen said:

"A few American colleges are now experimenting with honor courses on the British model. But none of these experiments, as far as I am familiar with them, yet goes far enough. The principle which in British universities applies only to honors' students should be adopted by American colleges and be applied universally. None should be allowed to graduate who have not demonstrated their ability for independent study and registered definite mastery of some field of knowledge. Not only would the American baccalaureate degree thus acquire a meaning which it now lacks, but the college of arts and sciences would become as serious and purposeful as are the professional divisions of the university."

Fewer Mothers Die From Blood-Poisoning.

During the first eight months of 1922 only 134 deaths from puerperal septicemia, or blood-poisoning of mothers at the time of childbirth, were registered in New York State outside of New York City. According to Dr. Otto R. Eichel, Director of the Division of Vital Statistics of the State Department of Health, there were 168 deaths from this cause during the corresponding period of 1921, indicating a reduction this year of 20 per cent. in this, the most preventable of the causes of maternal mortality. This decrease in deaths of mothers is accompanied by a marked increase in the number of reported cases of puerperal septicemia, due according to Dr. Eichel not to increased prevalence of the disease but to better diagnosis and reporting of this condition under the stimulus of the efforts made to reduce the mortality from this cause.

It is noteworthy that there has been little or no change this year as compared to 1921 and 1920 in the death rate from other and less preventable causes of mothers' deaths, such as hemorrhage, convulsions and accidents of pregnancy. This would seem to indicate that the recent widespread consideration of the need of saving mothers' and babies' lives which resulted in the enactment of the Sheppard-Towner Bill by Congress and the Davenport-Moore Law in New York State is already bringing about better care and attention to cleanliness and the prevention of blood-poisoning in connection with childbirth. The reduction is all the more encouraging in this State because it took place in advance of the actual organization of the field campaign of education which was made possible by the additional appropriations to the State Department of Health under the Davenport-Moore Law. The fact that the death rate from this cause decreased during the first part of 1922 indicates that it will almost certainly be low for the whole year, since it has been observed that puerperal septicemia is definitely more prevalent during the winter months. When the educational activities, which are now being promoted by Division of Maternity, Infancy and Child Hygiene, have taken full effect it is believed that many more deaths from this cause will be prevented.

Cause of Pyorrhea.

If we look in a book on dentistry, we find scores of different views as to the cause of pyorrhea. All can be combined into one ultimate cause, viz., the breaking down of the periosteum or lining of the teeth. Individuals with muscular jaws can strain their teeth, without bad effects, more than those not so favorably endowed by nature, as all muscles in the body are acting as if they were steel springs and jaw muscles give corresponding resiliency to the periosteum of the teeth. A little overstrain produces a lesion. If the individual should afterwards abstain from hard food for a time, the recuperative power of the animal system would heal the breach, but keeping the tooth in continual use, the break becomes larger and larger, until the gum shrinks, pus develops, and loosening in its socket occurs.

Tartar cannot be the cause of pyorrhea, as in healthy teeth the periosteum is cemented to the gums and is lying solidly on the dentine. Whenever tartar and pyorrhea occur on the same tooth, decay must have started before tartar could penetrate under the periosteum.

The view, that microorganisms are cause and origin of spread of pyorrhea, has never been substantiated. Louis Finsterwald claims they accumulate wherever a lesion of tissue develops, the different species invariably showing themselves pertinent to surroundings and connections. No special pyorrhea bacillus has ever been discovered. No other cartilage is affected with pyorrhea, because not exposed to the strain to which the periosteum of the teeth is subject.

Pyorrhea starts usually with the molars, because they have the hardest work to do in masticating the food. If the second and third molar or only the third is lost or drawn and all pyorrhea from the mouth removed thereby, it will start again in the course of years with the second bicuspid, on account of the abnormal strain put on it. If a canine or eye-tooth is lost, the same occurrence will happen with the lateral incisor. Any tooth lost and not replaced becomes thus the cause of endless tooth ailments. Replacement should be made with a plate, and bridge is to be employed only when the patient is vigorous. Bridges have been the cause of many losses of teeth of the ones bridged as well as on the opposite jaw on account of overstrain at the time, when the dentist performed his work, the strength of the jaw-muscles not being commensurate with the need.

Strong individuals have invariably good teeth, if they were strong from childhood up, except for dental caries which develop when there is an inclination to consuming abnormal quantities of starchy and sweet viands without using some antiseptic dental water, sufficiently to get rid of deposits remaining on teeth; afterwards pyorrhea can develop by the strain put on teeth adjoining to those decayed and lost ones. It goes without saying that teeth of which cavities have been filled, without necessity of killing the nerves, are to be counted among the sound ones.

Brushing the teeth with some dentifrice gives them a clean appearance, but to keep them sound, rinsing is necessary with an antiseptic liquid, the mouth to be almost filled with it, diluted according to circumstances, in order that every nook and corner be reached; this has the tendency also to delay and heal pyorrhea at the starting point.

Important Announcement.

The medical profession everywhere will be interested in the announcement that The Abbott Laboratories of Chicago have purchased the Dermatological Research Laboratories of Philadelphia. This is an advance step for The Abbott Laboratories and will give them deserved recognition among the leading manufacturers of medicinal products.

It will be remembered that the Dermatological Research Laboratories were the first in the United States to produce Arsphenamine during the war when there was such a scarcity of this article; and these Laboratories became well known to the medical profession for their patriotic attitude in developing and manufacturing chemical preparations in this country. By this purchase of the "D. R. I." products, The Abbott Laboratories inherited their prestige.

The Abbott Laboratories acquired control of the Dermatological Research Laboratories on November 1st, and are continuing to operate them in Philadelphia under the direction of Dr. Geo. W. Raiziss, head of the department of Chemistry, and his corps of specially trained assistants. Orders for "D. R. I." products will be promptly filled from the Philadelphia Laboratories or from the home office of The Abbott Laboratories, Chicago, or by any of their branches or distributors. For further particulars regarding their purchase of the Dermatological Research Laboratories, the readers of this Journal are referred to the statement of The Abbott Laboratories on another page of this issue, entitled "Important Announcement to the Medical Profession."

The Relief of Nerve Irritation.

During the past few years all events seemed to have combined to strain and tax the nervous system almost to the breaking point. The changes and uncertainties of every day life have been a constant source of irritation to nervous systems already profoundly affected by the fierce competition of modern life and the stress and worry of the up-to-date business methods. Occasionally the nerves require soothing, especially when headache or other painful conditions are constantly present, for it is beyond human power to endure continual nerve irritation without relief, for it is this path that leads to serious illness.

While medical men are agreed that the employment of sedatives is sometimes indicated, indeed essential, they are somewhat scrupulous of recommending the ordinary sedatives which rely for their action upon opium or its derivatives, which, of course, in the long run, are harmful in many ways. Phenalgin is a remedy for nerve irritation which exerts a distinctly soothing action without any of the injurious attributes of the narcotics usually employed. Phenalgin, in short, possesses the valuable properties of opium and its derivatives without its disadvantages and is therefore to be recommended for nervous affections arising from whatever cause. It is worthy of note and a fact which will especially appeal to the busy medical practitioner that in order to prescribe Phenalgin there is no need of narcotic blanks or the keeping of special records.

Emergency Medicine Sent by Air Mail.

For what is said to be the first time in Colorado, a prescription for a sick patient was recently rushed through by Government Air Mail Service.

On Saturday afternoon, August 12, a call came to the Denver Depot of H. K. Mulford Company, for a product for which there is little demand, and of which the depot had none in stock. Upon learning of the exigencies of the case, an order was telegraphed to the home office of H. K. Mulford Company, at Philadelphia, requesting shipment by airplane.

On Tuesday morning, August 15th, at 8:30, the package was delivered to the customer, thus establishing what is doubtless a record for quick service for delivery from Philadelphia to Denver.

Airplanes have already caused marked changes in the commerce of this country, and indications are that we have hardly begun to realize their possibilities.

The Treatment of Pneumonia

Perhaps, at the present time no acute disease is so universally prevalent as pneumonia. Pneumonia is both a complication of and an aftermath of influenza, and in the words which Osler applied to tuberculosis is "The captain of the soldiers of Death." While the prevalence of pneumonia is very great, its treatment is not altogether satisfactory. One indication for treatment, however, is clear, and that is the excruciating chest and muscular pains which often usher in an attack, and continue for several days. The administration of a sedative is absolutely necessary, as sufficient rest must be secured to preserve the patient's strength and prevent failure of the heart, which is the greatest source of danger. Opium and its derivatives will exert the desired anodyne effect, but their use for various obvious reasons is contraindicated, and they should never be used except as a last resort. Fortunately, the careful practitioner has in Phenalgin a pain-reliever that assures the anodyne effects of the opium products without their harmful tendencies. Phenalgin does not lock up the secretions, interfere with the digestive process, or establish a habit. Therefore, to afford a patient suffering from pneumonia the rest essential to recovery, Phenalgin should be employed for the simple reason that it is not only effective, but free from the objectionable features of the opiates and other anodynes.

Laxatives Replaced by Scientific Method

Just as expanding scientific knowledge has made seem incredible the old, careless days of indiscriminate blood-letting, so is the wide use of lexatives and cathartics appearing more dangerous in the light of newer knowledge.

Modern practitioners are prescribing Nujol (petrolatum liquidum) for intestinal stasis and resulting disorders. The efficacy of Nujol lies principally in the close resemblance of its action to that of the lubricating mucus secreted in the intestine. This lubricating mucus is usually deficient in contents and so assists their expulsion from the system.

The makers of Nujol have on hand authoritative literature prepared by physicians dealing with constipation and its sequelae. Any of these booklets, with sample, will be sent on request to Nujol Laboratories, Standard Oil Co. (New Jersey), 44 Beaver Street, New York.

Alkalol's Activities.

Alkalol is a very carefully worked out combination of certain physiological salts, which are directly indicated in the treatment of mucous membrane irritation or inflammation. The structure of any mucous membrane of any part of the body is practically the same.

The physiological principles upon which its particular secretion is formed and poured out are likewise practically identical. The statement that the best antiseptic solution for any mucous membrane is the normal secretion of the cells or glands situated therein is axiomatic.

It can be easily understood, therefore, how and why Alkalol is indicated in practically all kinds, varieties and degrees of mucous membrane inflammation. So much for theoretical combinations. Alkalol is by no means a new or unknown product. It has been offered to the profession for many years, and the number of physicians, surgeons and specialists who are users of Alkalol has steadily grown, year by year, until at present it represents a large proportion of the profession.

The physician who classes Alkalol with the many so-called anti-septic solutions errs because Alkalol is specifically designed to bring about as rapidly as possible, restoration of secretory activity, circulatory balance and normal tissue tone of the mucous membrane upon which it is used. Alkalol is alkaline, but its alkalinity is, so to speak, a specific alkalinity adapted to the particular purpose for which it is indicated. The same holds true of its salinity. It means much that Alkalol is hypotonic, because being hypotonic, it reverses the usual action of antiseptic solutions, reverses the osmotic current and passes the necessary salts into the cells instead of provoking their excessive output thereby bringing about hyper-secretion.

A liberal sample together with interesting literature will be sent gratis to any physician on request to The Alkalol Company, Taunton, Mass.

The name rickets is from the old English "wrickken," to twist. The disease was first described in 1649 by Arnold de Boot, a Frisian physician practicing in Ireland. The more technical medical term, rhachitis (or rachitis), was suggested by Francis Glisson in 1650.—(*Med. Facts.*)

Vice-President of Speech Society Offers Course in the West.

Mrs. Sarah H. Barber, second vice-president of the National Society for the Study and Correction of Speech Disorder, has just finished a class for speech teachers in the University of Utah, Salt Lake City, Utah. She had students come from all over the West and they are going back to carry the Swift methods of speech correction into eight new States. After vacationing at Long Beach, she will return to Boston to accept her new appointment as educational manager of the School for Speech Education, Boston, Mass. She will assist Dr. Swift in giving some of the Saturday course for speech teachers, which will extend through the Winter.

CLASSIFIED WANT ADVERTISEMENTS

$1.00 for 35 words or less. Additional words, 3c. each.
CASH WITH ORDER.
FOR SALE—EXCHANGE—SITUATIONS—PARTNERSHIPS, ETC.
FORMS CLOSE 24th OF THE MONTH.

TO THE BUSY PRACTITIONER

Can you, from a complete card index, learn: how much is owing; what is diagnosis; condition and treatment at last visit of each patient? I can do all this, as well as, receive your patients during visiting hours. Address Charles E. Burroughs, Farm Colony, Staten Island, N. Y. C11

Wanted—Registered nurse desires position as office assistant to physician and surgeon. Capable of giving anesthetics and doing laboratory work. Available at once. Can furnish references. Address B. F. M., care of The Medical Times. C12

For Sale—G.-U. office lease, good will, furniture, instruments and library; same has been occupied for 30 years; wish to retire; good opportunity for a younger man. Dr. W. S. Tharp, Sioux City, Iowa. C12

Physician Desires Position as examiner or assistant medical director at home office of insurance company. Good diagnostian and familiar with examinations and rating of applicants. First class recommendations as to ability and character. Address Insurance, care The Medical Times. C12

Position Wanted—Physician, middle age, wishes responsible position in sanitarium or private institution. New York or New Jersey. Active practice past fifteen years. Best of references as to professional standing and character. Address Physician, care The Medical Times. C12

For Sale—X-Ray and High Frequency.—Campbell's portable high frequency and X-ray coil. Model D, in excellent condition; gives also thermo-faradic, sinusoidal, D'Arsonval and cautery. X-ray tube, electrodes, etc. Cost $250, price $100. Address X-ray, care of The Medical Times. C12

For Sale.—Tables, Chairs, Cabinets, discontinued styles. Display samples. Second hand goods repaired, refinished, in first class condition, good as new. Write us your requirements. We no doubt have just what you want at greatly reduced prices. W. D. Allison Company, 899 No. Alabama St., Indianapolis, Ind. —12

RUBBER STAMPS

Barton Anatomical Chart Stamps.—Make diagnostic or pathological records accurate—graphic—Simple. One imprint can clearly show what a page of notes might leave obscured. Catalog on request. The Barton Mfg. Co., 89½ Duane St., New York.

Edward A. Kellar Company, Inc.—Makers and fitters of supporting belts, surgical corsets, elastic stockings, knee caps and anklets, trusses, arch supports, leg and spinal braces. Exclusive department for women with expert woman attendant. 160 West 72nd Street, near Broadway, New York City. Telephone 1764 Columbus. Office Hours: 8:30 A.M. to 5:30 P.M. —t.f.

Physician and Wife—As medical director or similar position in sanitarium or institution. Wife as matron or supervising housekeeper. Best of references as to character and ability. Address S. E. W., care of The Medical Times. C12

Convert Your Past Due Accounts Into Cash—Use Dr. Chas. Allen's intensely human collections over your signature. They get results. Complete set of 100, sent post paid upon receipt of price, $1.50. Write for your copy today. The American Specialty Company, Memphis, Tenn. —9

Morphine New Home Treatment for all Drug and Alcoholic Addictions.—Doctor:—Treat these cases at home privately yourself. No pain, very little discomfort. Positive results. Enclose stamp for full information. Dr. Quayle Sanatorium, Madison, Ohio, Box 3. C12

Oculists—We have a vacancy in our organization for a man of experience and personality. Permanent connection is offered, with opportunity for advancement as ability is demonstrated. Practice strictly ethical. M. H. Harris, Oculists and Opticians, 54 East 23rd Street, New York City. —t. f.

Gold Fish.—Imported Japanese, Chinese and American specimens; castles, globes, aquarium plants; we make artistic aquariums suitable for beautiful homes, conservatories, the office, lawns, etc., beautiful and interesting anywhere. Illustrated circular free. Pioneer Aquatic Co., Racine, Wis. —t.f.

Surgical Instruments Repaired.—Regardless of condition, we make new parts, sharpen knives and scissors, nickel plate, clean and polish. We repair anything! Send them in! Christian Schlicker Mfg. Co., 12 Bloomingdale St., Rochester, N. Y. —12

INDEX TO ADVERTISERS